09/980,559

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: September 9, 2004, 14:29:30 ; Search time 48 Seconds
(without alignments)
3.880 Million cell updates/sec

Title: I12861
Perfect score: 9589
Sequence: 1 ACCCGCCCCTAATAGGGGCG.....TTTTTTTTTTTTTTTTTTT 9589

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.0

Searched: 1 seqs, 9711 residues

Total number of hits satisfying chosen parameters: 2

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 1 summaries

Database : Pending_Patents_NA_Main:US-09-980-559-1
1: /cgn2_6/ptodata/2/pna/PCTUS_COMB.seq:US-09-980-559-1
2: /cgn2_6/ptodata/2/pna/US06_COMB.seq:US-09-980-559-1
3: /cgn2_6/ptodata/2/pna/US07_COMB.seq:US-09-980-559-1
4: /cgn2_6/ptodata/2/pna/US080_COMB.seq:US-09-980-559-1
5: /cgn2_6/ptodata/2/pna/US081_COMB.seq:US-09-980-559-1
6: /cgn2_6/ptodata/2/pna/US082_COMB.seq:US-09-980-559-1
7: /cgn2_6/ptodata/2/pna/US083_COMB.seq:US-09-980-559-1
8: /cgn2_6/ptodata/2/pna/US084_COMB.seq:US-09-980-559-1
9: /cgn2_6/ptodata/2/pna/US085_COMB.seq:US-09-980-559-1
10: /cgn2_6/ptodata/2/pna/US086_COMB.seq:US-09-980-559-1
11: /cgn2_6/ptodata/2/pna/US087_COMB.seq:US-09-980-559-1
12: /cgn2_6/ptodata/2/pna/US088_COMB.seq:US-09-980-559-1
13: /cgn2_6/ptodata/2/pna/US089_COMB.seq:US-09-980-559-1
14: /cgn2_6/ptodata/2/pna/US090_COMB.seq:US-09-980-559-1
15: /cgn2_6/ptodata/2/pna/US091_COMB.seq:US-09-980-559-1
16: /cgn2_6/ptodata/2/pna/US092A_COMB.seq:US-09-980-559-1
17: /cgn2_6/ptodata/2/pna/US092B_COMB.seq:US-09-980-559-1
18: /cgn2_6/ptodata/2/pna/US093A_COMB.seq:US-09-980-559-1
19: /cgn2_6/ptodata/2/pna/US093B_COMB.seq:US-09-980-559-1
20: /cgn2_6/ptodata/2/pna/US094_COMB.seq:US-09-980-559-1
21: /cgn2_6/ptodata/2/pna/US095A_COMB.seq:US-09-980-559-1
22: /cgn2_6/ptodata/2/pna/US095B_COMB.seq:US-09-980-559-1
23: /cgn2_6/ptodata/2/pna/US095C_COMB.seq:US-09-980-559-1
24: /cgn2_6/ptodata/2/pna/US095D_COMB.seq:US-09-980-559-1
25: /cgn2_6/ptodata/2/pna/US096A_COMB.seq:US-09-980-559-1
26: /cgn2_6/ptodata/2/pna/US096B_COMB.seq:US-09-980-559-1
27: /cgn2_6/ptodata/2/pna/US096C_COMB.seq:US-09-980-559-1
28: /cgn2_6/ptodata/2/pna/US096D_COMB.seq:US-09-980-559-1
29: /cgn2_6/ptodata/2/pna/US096E_COMB.seq:US-09-980-559-1
30: /cgn2_6/ptodata/2/pna/US097A_COMB.seq:US-09-980-559-1
31: /cgn2_6/ptodata/2/pna/US097B_COMB.seq:US-09-980-559-1
32: /cgn2_6/ptodata/2/pna/US097C_COMB.seq:US-09-980-559-1
33: /cgn2_6/ptodata/2/pna/US098A_COMB.seq:US-09-980-559-1
34: /cgn2_6/ptodata/2/pna/US098B_COMB.seq:US-09-980-559-1
35: /cgn2_6/ptodata/2/pna/US098C_COMB.seq:US-09-980-559-1
36: /cgn2_6/ptodata/2/pna/US098D_COMB.seq:US-09-980-559-1
37: /cgn2_6/ptodata/2/pna/US099A_COMB.seq:US-09-980-559-1
38: /cgn2_6/ptodata/2/pna/US099B_COMB.seq:US-09-980-559-1
39: /cgn2_6/ptodata/2/pna/US099C_COMB.seq:US-09-980-559-1
40: /cgn2_6/ptodata/2/pna/US099D_COMB.seq:US-09-980-559-1
41: /cgn2_6/ptodata/2/pna/US099E_COMB.seq:US-09-980-559-1
42: /cgn2_6/ptodata/2/pna/US099F_COMB.seq:US-09-980-559-1
43: /cgn2_6/ptodata/2/pna/US100A_COMB.seq:US-09-980-559-1
44: /cgn2_6/ptodata/2/pna/US100B_COMB.seq:US-09-980-559-1
45: /cgn2_6/ptodata/2/pna/US101A_COMB.seq:US-09-980-559-1
46: /cgn2_6/ptodata/2/pna/US101B_COMB.seq:US-09-980-559-1
47: /cgn2_6/ptodata/2/pna/US102A_COMB.seq:US-09-980-559-1
48: /cgn2_6/ptodata/2/pna/US102B_COMB.seq:US-09-980-559-1
49: /cgn2_6/ptodata/2/pna/US103A_COMB.seq:US-09-980-559-1
50: /cgn2_6/ptodata/2/pna/US103B_COMB.seq:US-09-980-559-1
51: /cgn2_6/ptodata/2/pna/US104A_COMB.seq:US-09-980-559-1
52: /cgn2_6/ptodata/2/pna/US104B_COMB.seq:US-09-980-559-1
53: /cgn2_6/ptodata/2/pna/US106_COMB.seq:US-09-980-559-1
54: /cgn2_6/ptodata/2/pna/US107A_COMB.seq:US-09-980-559-1
55: /cgn2_6/ptodata/2/pna/US107B_COMB.seq:US-09-980-559-1
56: /cgn2_6/ptodata/2/pna/US6000_COMB.seq:US-09-980-559-1
57: /cgn2_6/ptodata/2/pna/US6001_COMB.seq:US-09-980-559-1
58: /cgn2_6/ptodata/2/pna/US6002_COMB.seq:US-09-980-559-1
59: /cgn2_6/ptodata/2/pna/US6003_COMB.seq:US-09-980-559-1
60: /cgn2_6/ptodata/2/pna/US6004_COMB.seq:US-09-980-559-1
61: /cgn2_6/ptodata/2/pna/US6005_COMB.seq:US-09-980-559-1
62: /cgn2_6/ptodata/2/pna/US6006_COMB.seq:US-09-980-559-1
63: /cgn2_6/ptodata/2/pna/US6007_COMB.seq:US-09-980-559-1
64: /cgn2_6/ptodata/2/pna/US6008_COMB.seq:US-09-980-559-1
65: /cgn2_6/ptodata/2/pna/US6009_COMB.seq:US-09-980-559-1
66: /cgn2_6/ptodata/2/pna/US6010_COMB.seq:US-09-980-559-1
67: /cgn2_6/ptodata/2/pna/US6011_COMB.seq:US-09-980-559-1
68: /cgn2_6/ptodata/2/pna/US6012_COMB.seq:US-09-980-559-1
69: /cgn2_6/ptodata/2/pna/US6013_COMB.seq:US-09-980-559-1
70: /cgn2_6/ptodata/2/pna/US6014_COMB.seq:US-09-980-559-1
71: /cgn2_6/ptodata/2/pna/US6015_COMB.seq:US-09-980-559-1
72: /cgn2_6/ptodata/2/pna/US6016_COMB.seq:US-09-980-559-1
73: /cgn2_6/ptodata/2/pna/US6017_COMB.seq:US-09-980-559-1
74: /cgn2_6/ptodata/2/pna/US6018_COMB.seq:US-09-980-559-1
75: /cgn2_6/ptodata/2/pna/US6019_COMB.seq:US-09-980-559-1
76: /cgn2_6/ptodata/2/pna/US6020_COMB.seq:US-09-980-559-1
77: /cgn2_6/ptodata/2/pna/US6021_COMB.seq:US-09-980-559-1
78: /cgn2_6/ptodata/2/pna/US6022_COMB.seq:US-09-980-559-1
79: /cgn2_6/ptodata/2/pna/US6023A_COMB.seq:US-09-980-559-1
80: /cgn2_6/ptodata/2/pna/US6023B_COMB.seq:US-09-980-559-1
81: /cgn2_6/ptodata/2/pna/US6024_COMB.seq:US-09-980-559-1
82: /cgn2_6/ptodata/2/pna/US6025_COMB.seq:US-09-980-559-1
83: /cgn2_6/ptodata/2/pna/US6026_COMB.seq:US-09-980-559-1
84: /cgn2_6/ptodata/2/pna/US6027_COMB.seq:US-09-980-559-1
85: /cgn2_6/ptodata/2/pna/US6028_COMB.seq:US-09-980-559-1
86: /cgn2_6/ptodata/2/pna/US6029_COMB.seq:US-09-980-559-1
87: /cgn2_6/ptodata/2/pna/US6030_COMB.seq:US-09-980-559-1
88: /cgn2_6/ptodata/2/pna/US6031_COMB.seq:US-09-980-559-1
89: /cgn2_6/ptodata/2/pna/US6032_COMB.seq:US-09-980-559-1
90: /cgn2_6/ptodata/2/pna/US6033_COMB.seq:US-09-980-559-1
91: /cgn2_6/ptodata/2/pna/US6034_COMB.seq:US-09-980-559-1
92: /cgn2_6/ptodata/2/pna/US6035_COMB.seq:US-09-980-559-1
93: /cgn2_6/ptodata/2/pna/US6036_COMB.seq:US-09-980-559-1
94: /cgn2_6/ptodata/2/pna/US6037_COMB.seq:US-09-980-559-1
95: /cgn2_6/ptodata/2/pna/US6038_COMB.seq:US-09-980-559-1
96: /cgn2_6/ptodata/2/pna/US6039_COMB.seq:US-09-980-559-1
97: /cgn2_6/ptodata/2/pna/US6040_COMB.seq:US-09-980-559-1
98: /cgn2_6/ptodata/2/pna/US6041_COMB.seq:US-09-980-559-1
99: /cgn2_6/ptodata/2/pna/US6042_COMB.seq:US-09-980-559-1
100: /cgn2_6/ptodata/2/pna/US6043_COMB.seq:US-09-980-559-1
101: /cgn2_6/ptodata/2/pna/US6044_COMB.seq:US-09-980-559-1
102: /cgn2_6/ptodata/2/pna/US6045_COMB.seq:US-09-980-559-1
103: /cgn2_6/ptodata/2/pna/US6046_COMB.seq:US-09-980-559-1
104: /cgn2_6/ptodata/2/pna/US6047_COMB.seq:US-09-980-559-1
105: /cgn2_6/ptodata/2/pna/US6048_COMB.seq:US-09-980-559-1
106: /cgn2_6/ptodata/2/pna/US6049_COMB.seq:US-09-980-559-1
107: /cgn2_6/ptodata/2/pna/US6050_COMB.seq:US-09-980-559-1
108: /cgn2_6/ptodata/2/pna/US6051_COMB.seq:US-09-980-559-1
109: /cgn2_6/ptodata/2/pna/US6052_COMB.seq:US-09-980-559-1
110: /cgn2_6/ptodata/2/pna/US6053_COMB.seq:US-09-980-559-1

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

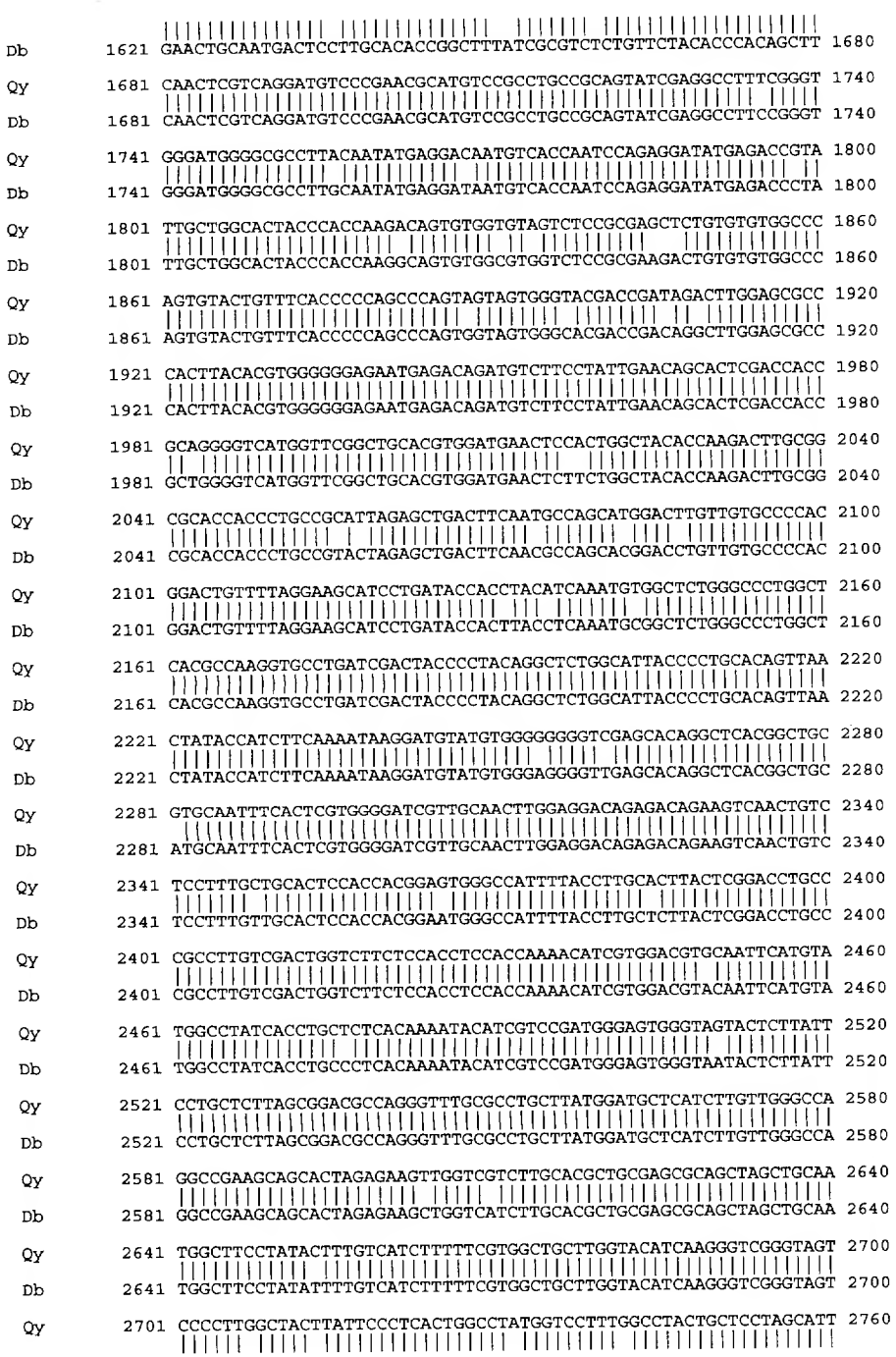
Result No.	Score	% Query Match	Length	DB	ID	Description
1	8970.38	93.5	9711	42	US-09-980-559-1	Sequence 1, Appli

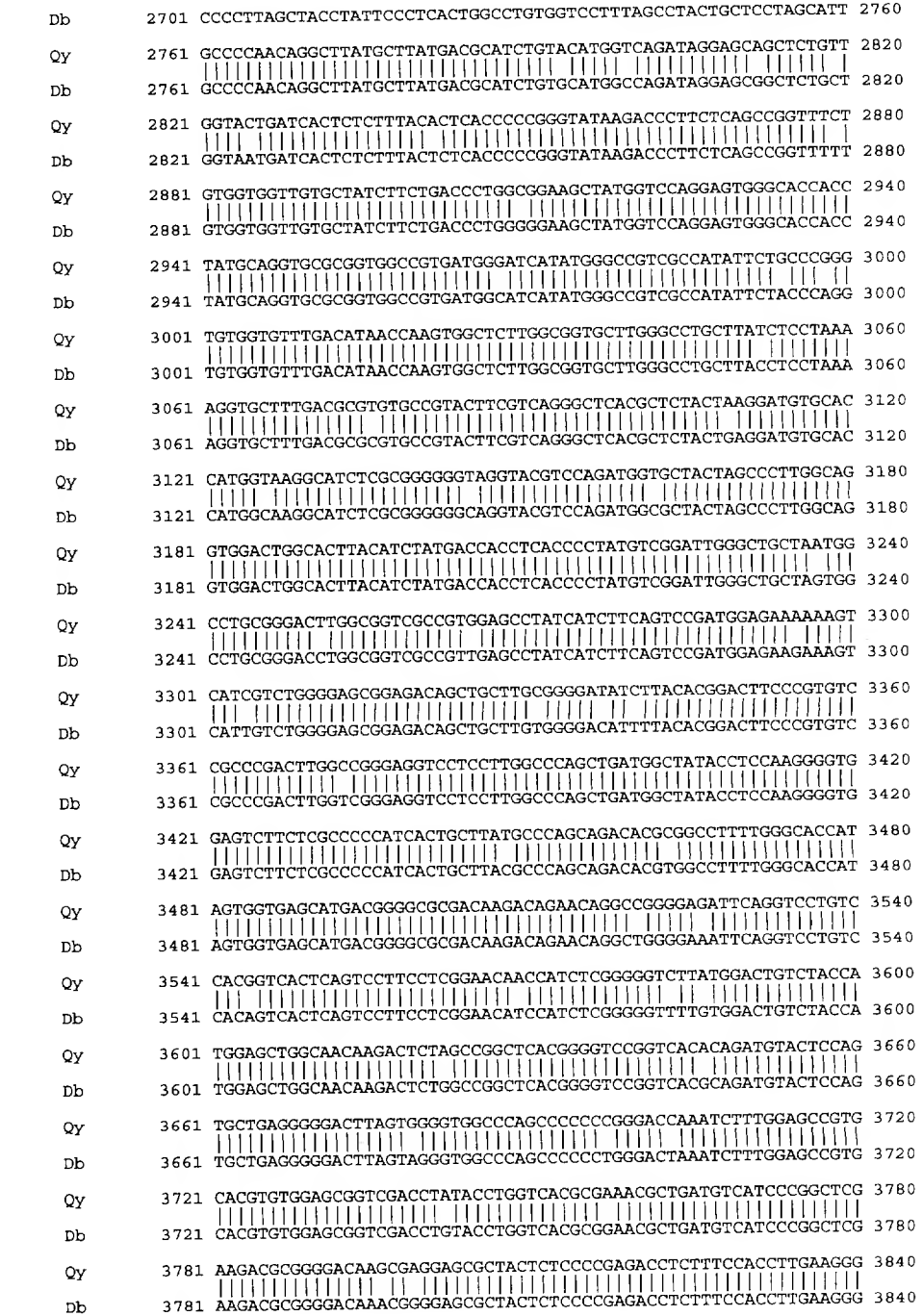
ALIGNMENTS

RESULT 1
US-09-980-559-1
; Sequence 1, Application US/09980559
; GENERAL INFORMATION:
; APPLICANT: Yanagi, Masayuki
; APPLICANT: Emerson, Suzanne
; APPLICANT: Bukh, Jens
; APPLICANT: Purcell, Robert
; TITLE OF INVENTION: Cloned Genome of Infectious Hepatitis C Viruses of
; TITLE OF INVENTION: Genotype 2a and Uses Thereof
; FILE REFERENCE: 20264302PC
; CURRENT APPLICATION NUMBER: US/09/980,559
; CURRENT FILING DATE: 2000-06-02
; PRIOR APPLICATION NUMBER: 60/137,693
; PRIOR FILING DATE: 1999-06-04
; NUMBER OF SEQ ID NOS: 39
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 9711
; TYPE: DNA
; ORGANISM: Hepatitis C virus
US-09-980-559-1

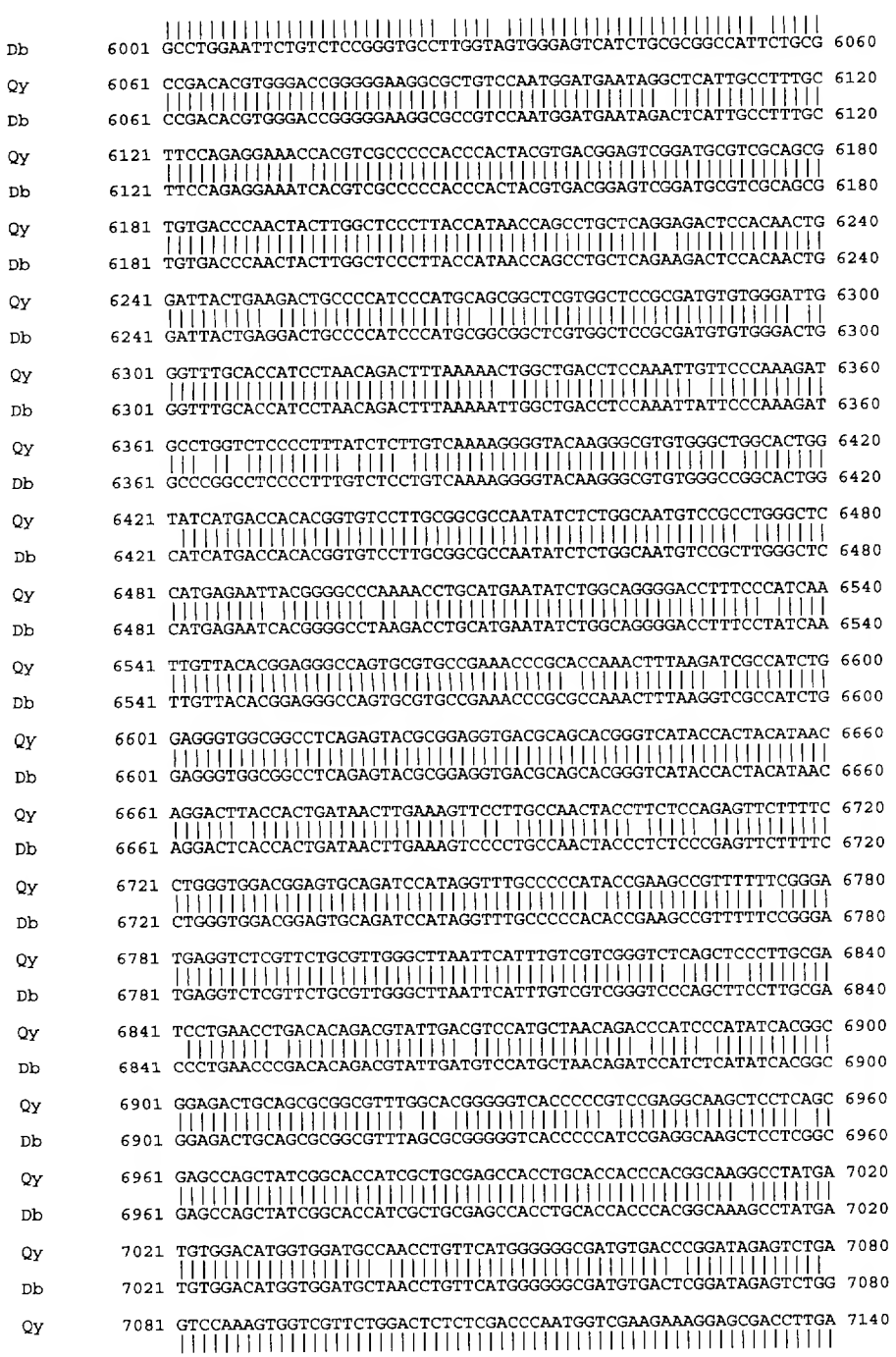
Query Match 93.5%; Score 8970.38; DB 42; Length 9711;
Best Local Similarity 96.0%; Pred. No. 0;
Matches 9202; Conservative 0; Mismatches 386; Indels 0; Gaps 0;

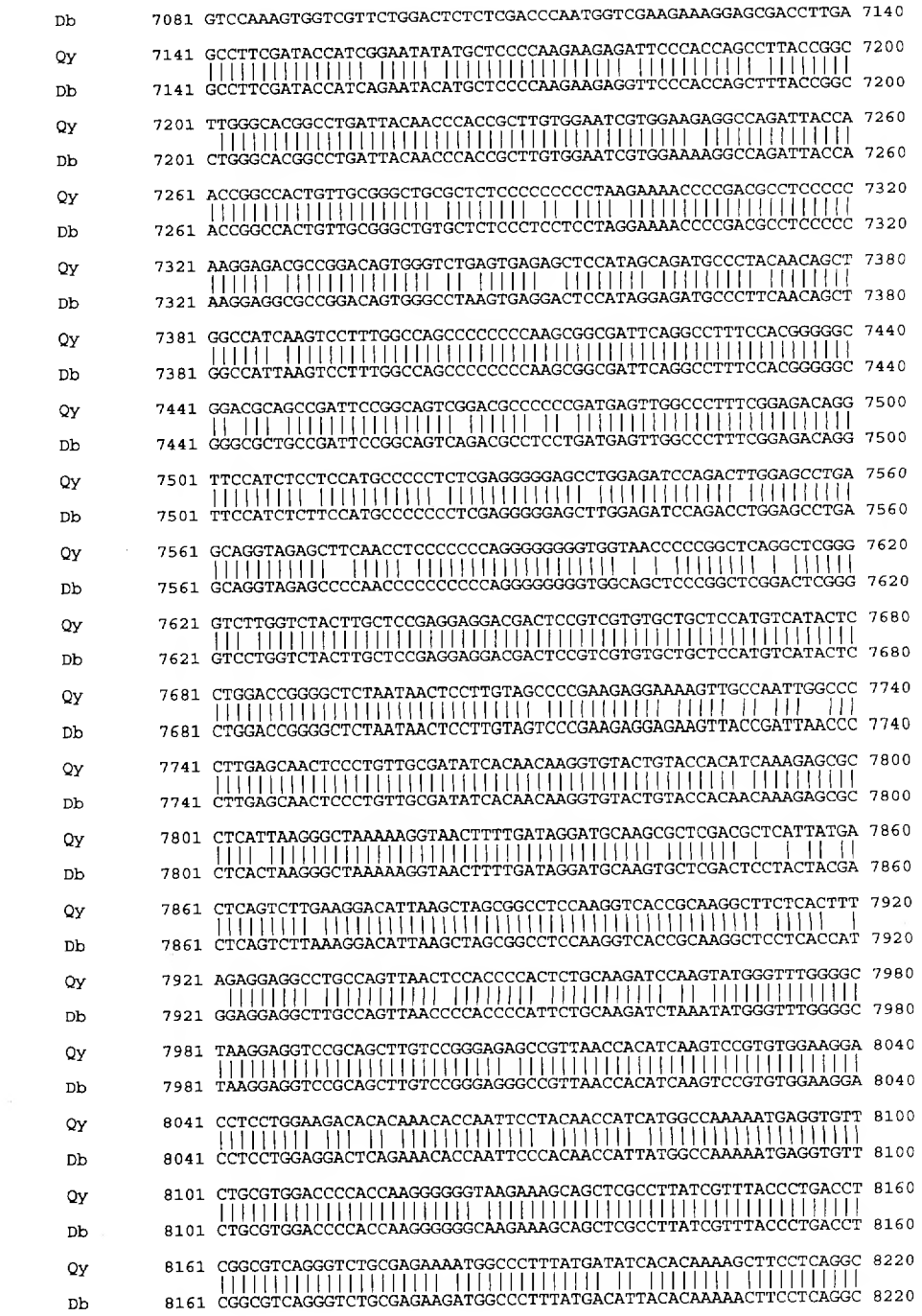
```
Qy       1 ACCCGCCCCTAATAGGGGCGACACTCCGCCATGAACCACTCCCCTGTGAGGAACTACTGT 60
Db       1 ACCCGCCCCTAATAGGGGCGACACTCCGCCATGAATCACTCCCCTGTGAGGAACTACTGT 60

Qy      61 CTTCACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTACAGCCTCCAGGCCC 120
Db      61 CTTCACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTACAGCCTCCAGGCCC 120

Qy     121 CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCCGGG 180
Db     121 CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCCGGG 180

Qy     181 AAGACTGGGTCCTTTCTTGGATAAACCCACTCTATGCCCGGTCATTTGGGCGTGCCCCCG 240
Db     181 AAGACTGGGTCCTTTCTTGGATAAACCCACTCTATGCCCGGCCATTTGGGCGTGCCCCCG 240

Qy     241 CAAGACTGCTAGCCGAGTAGCGTTGGGTTGCGAAAGGCCTTGTGGTACTGCCTGATAGGG 300
Db     241 CAAGACTGCTAGCCGAGTAGCGTTGGGTTGCGAAAGGCCTTGTGGTACTGCCTGATAGGG 300

Qy     301 TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACAAATCCTAAACC 360
Db     301 TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACAAATCCTAAACC 360

Qy     361 TCAAAGAAAAACCAAAAGAAACACCAACCGTCGCCCACAAGACGTTAAGTTTCCGGGCGG 420
Db     361 TCAAAGAAAAACCAAAAGAAACACCAACCGTCGCCCACAAGACGTTAAGTTTCCGGGCGG 420

Qy     421 CGGCCAGATCGTTGGCGGAGTATACTTGTTGCCGCGCAGGGGCCCCAGGTTGGGTGTGCG 480
Db     421 CGGCCAGATCGTTGGCGGAGTATACTTGTTGCCGCGCAGGGGCCCCAGGTTGGGTGTGCG 480

Qy     481 CGCGACAAGGAAGACTTCGGAGCGGTCCCAGCCACGTGGAAGGCGCCAGCCCATCCCTAA 540
Db     481 CGCGACAAGGAAGACTTCGGAGCGGTCCCAGCCACGTGGAAGGCGCCAGCCCATCCCTAA 540

Qy     541 GGATCGGCGCTCCACTGGCAAATCCTGGGGAAAACCAGGATACCCCTGGCCCCTATACGG 600
Db     541 AGATCGGCGCTCCACTGGCAAATCCTGGGGAAAACCAGGATACCCCTGGCCCCTATACGG 600

Qy     601 GAATGAGGGACTCGGCTGGGCAGGATGGCTCCTGTCCCCCCGAGGTTCCCGTCCCTCTTG 660
Db     601 GAATGAGGGACTCGGCTGGGCAGGATGGCTCCTGTCCCCCCGAGGTTCCCGTCCCTCTTG 660

Qy     661 GGGCCCCAATGACCCCCGGCATAGGTCCCGCAACGTGGGTAAGGTCATCGATACCCTAAC 720
Db     661 GGGCCCCAATGACCCCCGGCATAGGTCGCGCAACGTGGGTAAGGTCATCGATACCCTAAC 720

Qy     721 GTGCGGCTTTGCCGACCTCATGGGGTACATCCCTGTCGTAGGCGCCCCGCTCGGCGGCGT 780
Db     721 GTGCGGCTTTGCCGACCTCATGGGGTACATCCCTGTCGTGGGCGCCCCGCTCGGCGGCGT 780

Qy     781 CGCCAGAGCTCTCGCGCATGGCGTGAGAGTCCTGGAGGACGGGGTTAATTTTGCAACAGG 840
Db     781 CGCCAGAGCTCTCGCGCATGGCGTGAGAGTCCTGGAGGACGGGGTTAATTTTGCAACAGG 840

Qy     841 GAACTTACCCGGTTGCTCCTTTTCTATCTTCTTGCTGGCCCTGCTGTCCTGCATCACCAC 900
Db     841 GAACTTACCCGGTTGCTCCTTTTCTATCTTCTTGCTGGCCCTGCTGTCCTGCATCACCAC 900

Qy     901 CCCGGTCTCCGCTGCCGAAGTGAAGAACATCAGTACCGGCTACATGGTGACCAACGACTG 960
Db     901 CCCGGTCTCCGCTGCCGAAGTGAAGAACATCAGTACCGGCTACATGGTGACTAACGACTG 960

Qy     961 CACCAATGATAGCATTACCTGGCAACTCCAGGCTGCTGTCCTCCACGTCCCCGGGTGCGT 1020
Db     961 CACCAATGACAGCATTACCTGGCAGCTCCAGGCTGCTGTCCTCCACGTCCCCGGGTGCGT 1020

Qy    1021 CCCGTGCGAGAAAGTGGGGAATACATCTCGGTGCTGGATACCGGTCTCACCGAATGTGGC 1080
Db    1021 CCCGTGCGAGAAAGTGGGGAATGCATCTCAGTGCTGGATACCGGTCTCACCGAATGTGGC 1080

Qy    1081 CGTGCAGCAGCCCGGCGCCCTCACGCAGGGCTTACGGACGCACATTGACATGGTTGTGAT 1140
Db    1081 CGTGCAGCGGCCCGGCGCCCTCACGCAGGGCTTGCGGACGCACATCGACATGGTTGTGAT 1140

Qy    1141 GTCCGCCACGCTCTGCTCCGCTCTTTACGTGGGGGACCTCTGCGGTGGGGTGATGCTTGC 1200
Db    1141 GTCCGCCACGCTCTGCTCTGCCCTCTACGTGGGGGACCTCTGCGGTGGGGTGATGCTCGC 1200

Qy    1201 AGCCCAGATGTTCATTGTCTCGCCACAGCACCACTGGTTTGTGCAAGACTGCAATTGCTC 1260
Db    1201 AGCCCAAATGTTCATTGTCTCGCCGCAGCACCACTGGTTTGTCCAAGACTGCAATTGCTC 1260

Qy    1261 CATCTACCCTGGTACCATCACTGGACACCGCATGGCGTGGGACATGATGATGAACTGGTC 1320
Db    1261 CATCTACCCTGGTACCATCACTGGACACCGCATGGCATGGGACATGATGATGAACTGGTC 1320

Qy    1321 GCCCACGGCTACCATGATCCTGGCGTACGCGATGCGCGTCCCCGAGGTCATCATAGACAT 1380
Db    1321 GCCCACGGCTACCATGATCTTGGCGTACGCGATGCGTGTCCCCGAGGTCATTATAGACAT 1380

Qy    1381 CATTGGCGGGGCTCATTGGGGCGTCATGTTCGGCTTAGCCTACTTCTCTATGCAGGGAGC 1440
Db    1381 CATTAGCGGGGCTCATTGGGGCGTCATGTTCGGCTTGGCCTACTTCTCTATGCAGGGAGC 1440

Qy    1441 GTGGGCAAAAGTCGTTGTCATTCTTTTGCTGGCCGCCGGGGTGGACGCGCAAACCCATAC 1500
Db    1441 GTGGGCGAAAGTCGTTGTCATCCTTCTGTTGGCCGCCGGGGTGGACGCGCGCACCCATAC 1500

Qy    1501 CGTTGGGGGTTCTACCGCGCATAACGCCAGGACCCTCACCGGCATGTTCTCCCTTGGTGC 1560
Db    1501 TGTTGGGGGTTCTGCCGCGCAGACCACCGGGCGCCTCACCAGCTTATTTGACATGGGCCC 1560

Qy    1561 CAGGCAGAAAATCCAGCTCATCAACACCAATGGCAGTTGGCACATCAACCGCACCGCCCT 1620
Db    1561 CAGGCAGAAAATCCAGCTCGTTAACACCAATGGCAGCTGGCACATCAACCGCACCGCCCT 1620

Qy    1621 GAACTGCAATGACTCTTTGCACACCGGCTTCCTCGCGTCACTGTTCTACACCCACAGCTT 1680
```





```
Qy    3841 GTCCTCGGGGGGCCCGGTGCTCTGCCCCAGAGGCCACGCTGTCGGGGTCTTCCGGGCAGC 3900
Db    3841 GTCCTCAGGAGGCCCGGTGCTATGCCCCAGGGGCCACGCTGTCGGAGTCTTCCGGGCAGC 3900

Qy    3901 CGTGTGCTCCCGGGGCGTGGCCAAGTCCATAGATTTTATCCCCGTTGAGACACTTGACAT 3960
Db    3901 TGTGTGCTCTCGGGGCGTGGCTAAGTCCATAGATTTCATCCCCGTTGAGACACTCGACAT 3960

Qy    3961 CGTCACTCGGTCCCCCACCTTTAGTGACAACAGCACACCACCTGCTGTGCCCCAAACTTA 4020
Db    3961 CGTCACGCGGTCCCCCACCTTTAGTGACAACAGCACACCACCTGCTGTGCCCCAGACCTA 4020

Qy    4021 TCAGGTCGGGTACTTACATGCCCCGACTGGTAGTGGAAAGAGCACCAAAGTCCCTGTCGC 4080
Db    4021 TCAGGTCGGGTACTTGCATGCCCCGACTGGCAGTGGAAAGAGCACCAAAGTTCCTGTCGC 4080

Qy    4081 GTATGCCGCTCAGGGGTACAAAGTGCTAGTGCTTAATCCCTCGGTGGCTGCCACCCTGGG 4140
Db    4081 ATATGCTGCTCAGGGGTATAAAGTGCTAGTGCTTAATCCCTCAGTGGCTGCCACCCTGGG 4140

Qy    4141 GTTTGGGGCGTACTTGTCCAAGGCACATGGCATCAATCCCAACATTAGGACTGGGGTCAG 4200
Db    4141 GTTTGGGGCGTACTTGTCTAAGGCACATGGCATCAATCCCAACATTAGGACTGGAGTCAG 4200

Qy    4201 GACTGTGACGACCGGGGCGCCCATCACGTACTCCACATATGGCAAATTCCTCGCCGATGG 4260
Db    4201 GACTGTGACGACCGGGGCGCCCATCACGTACTCCACATATGGCAAATTCCTCGCCGATGG 4260

Qy    4261 GGGCTGCGCAGGCGGCGCCTATGACATCATCATATGCGATGAATGCCATGCCGTGGACTC 4320
Db    4261 GGGCTGTGCGGGCGGCGCCTACGACATCATCATATGTGATGAATGCCATGCCGTGGACTC 4320

Qy    4321 TACCACCATTCTCGGCATCGGAACAGTCCTCGATCAAGCAGAGACAGCCGGGGTCAGGCT 4380
Db    4321 TACCACCATCCTTGGCATCGGAACAGTCCTTGATCAAGCAGAGACAGCTGGGGTCAGACT 4380

Qy    4381 AACTGTACTGGCTACGGCTACGCCCCCCGGGTCAGTGACAACCCCCCACCCCAACATAGA 4440
Db    4381 AACTGTGCTGGCTACAGCTACGCCCCCTGGGTCAGTGACAACCCCCCACCCCAACATAGA 4440

Qy    4441 GGAGGTGGCCCTCGGGCAGGAGGGTGAGATCCCCTTCTATGGGAGGGCGATTCCCCTGTC 4500
Db    4441 GGAGGTGGCCCTTGGGCAGGAGGGCGAGATCCCCTTCTATGGGAGGGCGATTCCCCTGTC 4500

Qy    4501 ATACATCAAGGGAGGAAGACACTTGATCTTCTGCCACTCAAAGAAAAAGTGTGACGAGCT 4560
Db    4501 TTACATCAAGGGAGGAAGACATCTGATCTTCTGCCATTCAAAGAAAAAGTGTGACGAGCT 4560

Qy    4561 CGCGGCGGCCCTTCGGGGTATGGGCTTGAACGCAGTGGCATACTACAGAGGGCTGGACGT 4620
Db    4561 CGCGGCGGCCCTTCGGGGTATGGGCTTGAACTCAGTGGCATACTACAGAGGGTTGGACGT 4620

Qy    4621 CTCCGTAATACCAACTCAGGGAGACGTAGTGGTCGTCGCCACCGACGCCCTCATGACGGG 4680
Db    4621 CTCCGTAATACCAACTCAGGGAGACGTAGTGGTCGTCGCCACCGACGCCCTCATGACAGG 4680

Qy    4681 GTTTACTGGAGACTTTGACTCCGTGATCGACTGCAACGTAGCGGTCACTCAAGTTGTAGA 4740
Db    4681 GTATACTGGGGACTTTGACTCCGTGATCGACTGCAACGTAGCGGTCACTCAAGTTGTAGA 4740

Qy    4741 CTTCAGCTTGGACCCCACATTCACCATAACCACACAGACTGTCCCTCAAGACGCTGTCTC 4800
Db    4741 CTTCAGTTTAGACCCCACATTCACCATAACCACACAGATTGTCCCTCAAGACGCTGTCTC 4800

Qy    4801 ACGTAGCCAGCGCCGGGGCCGCACGGGCAGGGGAAGACTGGGTATTTATAGGTATGTTTC 4860
Db    4801 ACGTAGCCAGCGCCGGGGTCGCACGGGTAGGGGAAGACTGGGCATTTATAGGTATGTTTC 4860

Qy    4861 CACTGGTGAGCGAGCCTCAGGAATGTTTGACAGTGTAGTGCTCTGCGAGTGCTACGATGC 4920
Db    4861 CACTGGTGAGCGAGCCTCAGGAATGTTTGACAGTGTAGTGCTCTGTGAGTGCTACGACGC 4920

Qy    4921 AGGGGCCGCATGGTATGAGCTCACACCAGCGGAGACCACCGTCAGGCTCAGAGCATATTT 4980
Db    4921 AGGGGCCGCATGGTATGAGCTCACACCATCGGAGACCACCGTCAGGCTCAGGGCGTATTT 4980

Qy    4981 CAACACACCTGGTTTGCCTGTGTGCCAAGACCATCTTGAGTTTTGGGAGGCAGTTTTCAC 5040
Db    4981 CAACACGCCCGGTTTGCCTGTGTGCCAAGACCATCTTGAGTTTTGGGAGGCAGTTTTCAC 5040

Qy    5041 CGGCCTCACACACATAGATGCCCACTTCCTTTCCCAAACAAAGCAATCGGGGGAAAATTT 5100
Db    5041 CGGCCTCACACACATAGATGCCCACTTCCTTTCCCAAACAAAGCAATCGGGGGAAAATTT 5100

Qy    5101 CGCATACTTAACAGCCTACCAGGCTACAGTGTGCGCTAGGGCCAAAGCCCCCCCCCCGTC 5160
Db    5101 CGCATACTTAACAGCCTACCAGGCTACAGTGTGCGCTAGGGCCAAAGCCCCCCCCCCGTC 5160

Qy    5161 CTGGGACGTCATGTGGAAGTGTTTGACTCGACTCAAGCCCACACTCGTGGGCCCCACACC 5220
Db    5161 CTGGGACGTCATGTGGAAGTGTTTGACTCGACTCAAGCCCACACTCGTGGGCCCCACACC 5220

Qy    5221 TCTCCTGTACCGCTTGGGCTCTGTTACCAACGAGGTCACCCTCACGCATCCTGTGACGAA 5280
Db    5221 TCTCCTGTACCGCTTGGGCTCTGTTACCAACGAGGTCACCCTCACACATCCCGTGACGAA 5280

Qy    5281 ATACATCGCCACCTGCATGCAAGCCGACCTTGAGGTCATGACCAGCACGTGGGTCTTAGC 5340
Db    5281 ATACATCGCCACCTGCATGCAAGCCGACCTTGAGGTCATGACCAGCACATGGGTCTTGGC 5340

Qy    5341 TGGGGGGGTCTTGGCGGCCGTCGCCGCGTACTGCCTGGCGACCGGGTGTGTTTGCATCAT 5400
Db    5341 AGGGGGAGTCTTGGCGGCCGTCGCCGCGTATTGCCTGGCGACCGGGTGTGTTTGCATCAT 5400

Qy    5401 CGGCCGCTTGCACGTTAACCAGCGAGCCGTCGTTGCACCGGACAAGGAGGTCCTCTATGA 5460
Db    5401 CGGCCGCTTGCACATTAACCAGCGAGCCGTCGTTGCGCCGGACAAGGAGGTCCTCTATGA 5460

Qy    5461 GGCTTTTGATGAGATGGAGGAATGTGCCTCTAGAGCGGCTCTCATTGAAGAGGGGCAGCG 5520
Db    5461 GGCTTTTGATGAGATGGAGGAATGTGCCTCTAGGGCGGCTCTCATTGAAGAGGGGCAGCG 5520

Qy    5521 GATAGCCGAGATGCTGAAGTCCAAGATCCAAGGCTTATTGCAGCAAGCTTCCAAACAAGC 5580
Db    5521 GATAGCCGAGATGCTGAAGTCCAAGATCCAAGGCTTATTGCAGCAAGCTTCCAAACAAGC 5580

Qy    5581 TCAAGACATACAACCCGCTGTGCAGGCTTCTTGGCCCAAGGTAGAGCAATTCTGGGCCAA 5640
Db    5581 TCAAGACATACAACCCACTGTGCAGGCTTCATGGCCCAAGGTAGAACAATTCTGGGCCAA 5640

Qy    5641 ACACATGTGGAACTTCATCAGCGGCATTCAATACCTCGCAGGACTATCAACACTGCCAGG 5700
Db    5641 ACACATGTGGAACTTCATTAGCGGCATCCAATACCTCGCAGGACTATCAACACTGCCAGG 5700

Qy    5701 GAACCCTGCTGTAGCTTCCATGATGGCATTCAGTGCCGCCCTCACCAGTCCGTTGTCAAC 5760
Db    5701 GAACCCTGCAGTAGCTTCCATGATGGCGTTCAGTGCCGCCCTCACCAGTCCGCTGTCAAC 5760

Qy    5761 TAGCACCACTATCCTTCTCAACATTTTGGGGGGCTGGCTAGCATCCCAAATTGCGCCTCC 5820
Db    5761 AAGCACCACTATCCTTCTCAACATTTTGGGGGGCTGGCTAGCATCCCAAATTGCACCACC 5820

Qy    5821 CGCGGGGGCTACCGGCTTCGTCGTCAGTGGCCTGGTGGGGGCTGCCGTAGGCAGCATAGG 5880
Db    5821 CGCGGGGGCCACTGGCTTCGTTGTCAGTGGCCTAGTGGGAGCTGCCGTAGGCAGTATAGG 5880

Qy    5881 CTTGGGTAAGGTGCTGGTGGACATCCTGGCAGGGTATGGTGCGGGCATTTCGGGGGCTCT 5940
Db    5881 CTTAGGTAAGGTGCTAGTGGACATCCTGGCAGGGTATGGTGCGGGCATTTCGGGGGCTCT 5940

Qy    5941 CGTCGCATTCAAGATCATGTCTGGCGAGAAGCCCTCCATGGAGGATGTTGTCAACCTGCT 6000
Db    5941 CGTCGCATTCAAGATCATGTCTGGCGAGAAGCCCTCCATGGAGGATGTCGTCAACTTGCT 6000

Qy    6001 GCCTGGAATTCTGTCTCCGGGTGCCCTGGTGGTGGGAGTCATCTGCGCGGCCATCCTGCG 6060
```





```
Qy      8221 GGTGATGGGGGCTTCTTATGGATTCCAGTACTCCCCCGCTCAGCGGGTGGAGTTTCTCTT 8280
Db      8221 GGTGATGGGGGCTTCTTATGGATTCCAGTATTCCCCCGCTCAGCGGGTAGAGTTTCTCTT 8280

Qy      8281 GAAGGCATGGGCGGAAAAGAAAGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGA 8340
Db      8281 GAAAGCATGGGCGGAAAAGAAGGACCCTATGGGTTTTTCGTATGATACCCGATGCTTTGA 8340

Qy      8341 CTCAACCGTCACTGAGAGAGACATCAGGACTGAGGAGTCCATATATCGGGCTTGTTCCTT 8400
Db      8341 CTCAACCGTCACTGAGAGAGACATCAGGACTGAGGAGTCCATATATCGGGCCTGCTCCTT 8400

Qy      8401 GCCCGAGGAGGCCCACACTGCCATACACTCACTGACTGAGAGACTTTACGTGGGAGGGCC 8460
Db      8401 GCCCGAGGAGGCCCACACTGCCATACACTCGCTAACTGAGAGACTTTACGTGGGAGGGCC 8460

Qy      8461 CATGTTCAACAGCAAGGGCCAGACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTGCT 8520
Db      8461 TATGTTCAACAGCAAGGGCCAAACCTGCGGGTACAGGCGTTGCCGCGCCAGCGGGGTGCT 8520

Qy      8521 TACCACTAGCATGGGGAACACCATCACATGCTATGTGAAAGCCTTAGCGGCCTGTAAGGC 8580
Db      8521 CACCACTAGCATGGGGAACACCATCACATGCTACGTGAAAGCCTTAGCGGCTTGTAAAGC 8580

Qy      8581 TGCAGGGATAATTGCGCCCACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGA 8640
Db      8581 TGCAGGGATAATCGCGCCCACAATGCTGGTATGCGGCGATGACTTGGTTGTCATCTCAGA 8640

Qy      8641 GAGCCAGGGGACCGAGGAGGACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAG 8700
Db      8641 AAGCCAGGGGACCGAGGAGGACGAGCGGAACCTGAGAGCCTTCACGGAGGCTATGACCAG 8700

Qy      8701 GTATTCTGCCCCTCCTGGTGACCCCCCCAGACCGGAATATGACCTGGAGCTGATAACATC 8760
Db      8701 GTATTCTGCCCCTCCTGGTGACCCCCCCAGACCGGAGTATGATCTGGAGCTGATAACATC 8760

Qy      8761 TTGCTCCTCAAATGTGTCTGTGGCGTTGGGCCCACAAGGCCGCCGCAGATACTACCTGAC 8820
Db      8761 TTGCTCCTCAAATGTGTCTGTGGCGCTGGGCCCACAAGGCCGCCGCAGATACTACCTGAC 8820

Qy      8821 CAGAGACCCTACCACTCCAATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGT 8880
Db      8821 CAGAGACCCTACCACTCCAATCGCCCGGGCTGCCTGGGAAACAGTTAGACACTCCCCTGT 8880

Qy      8881 CAATTCATGGCTAGGAAACATCATCCAGTACGCCCCAACCATATGGGCTCGCATGGTCCT 8940
Db      8881 CAATTCATGGCTGGGAAACATCATCCAGTACGCCCCGACCATATGGGCTCGCATGGTCCT 8940

Qy      8941 GATGACACACTTCTTCTCCATTCTCATGGCCCAAGATACTCTGGACCAGAACCTCAACTT 9000
Db      8941 GATGACACACTTCTTCTCCATTCTCATGGCTCAAGACACGCTGGACCAGAACCTCAACTT 9000

Qy      9001 TGAGATGTACGGAGCGGTGTACTCCGTGAGTCCCTTGGACCTCCCAGCCATAATTGAAAG 9060
Db      9001 TGAGATGTACGGAGCGGTGTACTCCGTGAGTCCCTTGGACCTCCCAGCTATAATTGAAAG 9060

Qy      9061 GTTACACGGGCTTGACGCTTTCTCTCTGCACACATACACTCCCCACGAACTGACACGGGT 9120
Db      9061 GTTACATGGGCTTGACGCTTTTTCTCTGCACACATACACTCCCCACGAACTGACACGGGT 9120

Qy      9121 GGCTTCAGCCCTCAGAAAACTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACG 9180
Db      9121 GGCTTCAGCCCTCAGAAAACTTGGGGCGCCACCCCTCAGAGCGTGGAAGAGCCGGGCACG 9180

Qy      9181 TGCAGTCAGGGCGTCCCTCATCTCCCGTGGGGGGAGAGCGGCCGTTTGCGGCCGATATCT 9240
Db      9181 TGCAGTCAGGGCGTCCCTCATCTCCCGTGGGGGGAGAGCGGCCGTTTGCGGTCGATATCT 9240

Qy      9241 CTTCAACTGGGCGGTGAAGACCAAGCTCAAACTCACTCCATTGCCGGAAGCGCGCCTCCT 9300
Db      9241 CTTCAATTGGGCGGTGAAGACCAAGCTCAAACTCACTCCATTGCCGGAAGCGCGCCTCCT 9300

Qy      9301 GGATTTATCCAGCTGGTTCACTGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTGTC 9360
Db      9301 GGATTTATCCAGCTGGTTCACCGTCGGCGCCGGCGGGGGCGACATTTATCACAGCGTGTC 9360

Qy      9361 GCGTGCCCGACCCCGCTTATTACTCCTTGGCCTACTCCTACTTTTTGTAGGGGTAGGCCT 9420
Db      9361 GCGTGCCCGACCCCGCTTATTGCTCTTTGGCCTACTCCTACTTTTTGTAGGGGTAGGCCT 9420

Qy      9421 TTTCCTACTCCCCGCTCGGTAGAGCGGCACACATTAGCTACACTCCATAGCTAACTGTCC 9480
Db      9421 TTTCCTACTCCCCGCTCGGTAGAGCGGCACACATTAGCTACACTCCATAGCTAACTGTCC 9480

Qy      9481 CTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT 9540
Db      9481 CTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT 9540

Qy      9541 TTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTTT 9588
Db      9541 TTTTTTTTTTTTTTTTTTTTTTTTTTTCTTTTTTTCTCTTTTCCTTCTTT 9588
```

Search completed: September 9, 2004, 14:30:20
Job time : 50 secs

GenCore version 5.1.6

OM nucleic - nucleic search, using sw model

Run on: September 9, 2004, 14:24:17 ; Search time 57 Seconds
(without alignments)
3.267 Million cell updates/sec

Title: I12861
Perfect score: 9589
Sequence: 1 ACCCGCCCCTAATAGGGGCG.....TTTTTTTTTTTTTTTTTTT 9589

Scoring table: IDENTITY_NUC
Gapop 10.0 , Gapext 0.5

Searched: 1 seqs, 9711 residues

Total number of hits satisfying chosen parameters: 2

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 1 summaries

Database : Pending_Patents_NA_Main:US-09-980-559-1
1: /cgn2_6/ptodata/2/pna/PCTUS_COMB.seq:US-09-980-559-1
2: /cgn2_6/ptodata/2/pna/US06_COMB.seq:US-09-980-559-1
3: /cgn2_6/ptodata/2/pna/US07_COMB.seq:US-09-980-559-1
4: /cgn2_6/ptodata/2/pna/US080_COMB.seq:US-09-980-559-1
5: /cgn2_6/ptodata/2/pna/US081_COMB.seq:US-09-980-559-1
6: /cgn2_6/ptodata/2/pna/US082_COMB.seq:US-09-980-559-1
7: /cgn2_6/ptodata/2/pna/US083_COMB.seq:US-09-980-559-1
8: /cgn2_6/ptodata/2/pna/US084_COMB.seq:US-09-980-559-1
9: /cgn2_6/ptodata/2/pna/US085_COMB.seq:US-09-980-559-1
10: /cgn2_6/ptodata/2/pna/US086_COMB.seq:US-09-980-559-1
11: /cgn2_6/ptodata/2/pna/US087_COMB.seq:US-09-980-559-1
12: /cgn2_6/ptodata/2/pna/US088_COMB.seq:US-09-980-559-1
13: /cgn2_6/ptodata/2/pna/US089_COMB.seq:US-09-980-559-1
14: /cgn2_6/ptodata/2/pna/US090_COMB.seq:US-09-980-559-1
15: /cgn2_6/ptodata/2/pna/US091_COMB.seq:US-09-980-559-1
16: /cgn2_6/ptodata/2/pna/US092A_COMB.seq:US-09-980-559-1
17: /cgn2_6/ptodata/2/pna/US092B_COMB.seq:US-09-980-559-1
18: /cgn2_6/ptodata/2/pna/US093A_COMB.seq:US-09-980-559-1
19: /cgn2_6/ptodata/2/pna/US093B_COMB.seq:US-09-980-559-1
20: /cgn2_6/ptodata/2/pna/US094_COMB.seq:US-09-980-559-1
21: /cgn2_6/ptodata/2/pna/US095A_COMB.seq:US-09-980-559-1
22: /cgn2_6/ptodata/2/pna/US095B_COMB.seq:US-09-980-559-1
23: /cgn2_6/ptodata/2/pna/US095C_COMB.seq:US-09-980-559-1
24: /cgn2_6/ptodata/2/pna/US095D_COMB.seq:US-09-980-559-1
25: /cgn2_6/ptodata/2/pna/US096A_COMB.seq:US-09-980-559-1
26: /cgn2_6/ptodata/2/pna/US096B_COMB.seq:US-09-980-559-1
27: /cgn2_6/ptodata/2/pna/US096C_COMB.seq:US-09-980-559-1
28: /cgn2_6/ptodata/2/pna/US096D_COMB.seq:US-09-980-559-1
29: /cgn2_6/ptodata/2/pna/US096E_COMB.seq:US-09-980-559-1
30: /cgn2_6/ptodata/2/pna/US097A_COMB.seq:US-09-980-559-1
31: /cgn2_6/ptodata/2/pna/US097B_COMB.seq:US-09-980-559-1
32: /cgn2_6/ptodata/2/pna/US097C_COMB.seq:US-09-980-559-1
33: /cgn2_6/ptodata/2/pna/US098A_COMB.seq:US-09-980-559-1
34: /cgn2_6/ptodata/2/pna/US098B_COMB.seq:US-09-980-559-1
35: /cgn2_6/ptodata/2/pna/US098C_COMB.seq:US-09-980-559-1
36: /cgn2_6/ptodata/2/pna/US098D_COMB.seq:US-09-980-559-1
37: /cgn2_6/ptodata/2/pna/US099A_COMB.seq:US-09-980-559-1
38: /cgn2_6/ptodata/2/pna/US099B_COMB.seq:US-09-980-559-1
39: /cgn2_6/ptodata/2/pna/US099C_COMB.seq:US-09-980-559-1
40: /cgn2_6/ptodata/2/pna/US099D_COMB.seq:US-09-980-559-1
41: /cgn2_6/ptodata/2/pna/US099E_COMB.seq:US-09-980-559-1
42: /cgn2_6/ptodata/2/pna/US099F_COMB.seq:US-09-980-559-1
43: /cgn2_6/ptodata/2/pna/US100A_COMB.seq:US-09-980-559-1
44: /cgn2_6/ptodata/2/pna/US100B_COMB.seq:US-09-980-559-1
45: /cgn2_6/ptodata/2/pna/US101A_COMB.seq:US-09-980-559-1
46: /cgn2_6/ptodata/2/pna/US101B_COMB.seq:US-09-980-559-1
47: /cgn2_6/ptodata/2/pna/US102A_COMB.seq:US-09-980-559-1
48: /cgn2_6/ptodata/2/pna/US102B_COMB.seq:US-09-980-559-1
49: /cgn2_6/ptodata/2/pna/US103A_COMB.seq:US-09-980-559-1
50: /cgn2_6/ptodata/2/pna/US103B_COMB.seq:US-09-980-559-1
51: /cgn2_6/ptodata/2/pna/US104A_COMB.seq:US-09-980-559-1
52: /cgn2_6/ptodata/2/pna/US104B_COMB.seq:US-09-980-559-1
53: /cgn2_6/ptodata/2/pna/US106_COMB.seq:US-09-980-559-1
54: /cgn2_6/ptodata/2/pna/US107A_COMB.seq:US-09-980-559-1
55: /cgn2_6/ptodata/2/pna/US107B_COMB.seq:US-09-980-559-1
56: /cgn2_6/ptodata/2/pna/US6000_COMB.seq:US-09-980-559-1
57: /cgn2_6/ptodata/2/pna/US6001_COMB.seq:US-09-980-559-1
58: /cgn2_6/ptodata/2/pna/US6002_COMB.seq:US-09-980-559-1
59: /cgn2_6/ptodata/2/pna/US6003_COMB.seq:US-09-980-559-1
60: /cgn2_6/ptodata/2/pna/US6004_COMB.seq:US-09-980-559-1
61: /cgn2_6/ptodata/2/pna/US6005_COMB.seq:US-09-980-559-1
62: /cgn2_6/ptodata/2/pna/US6006_COMB.seq:US-09-980-559-1
63: /cgn2_6/ptodata/2/pna/US6007_COMB.seq:US-09-980-559-1
64: /cgn2_6/ptodata/2/pna/US6008_COMB.seq:US-09-980-559-1
65: /cgn2_6/ptodata/2/pna/US6009_COMB.seq:US-09-980-559-1
66: /cgn2_6/ptodata/2/pna/US6010_COMB.seq:US-09-980-559-1
67: /cgn2_6/ptodata/2/pna/US6011_COMB.seq:US-09-980-559-1
68: /cgn2_6/ptodata/2/pna/US6012_COMB.seq:US-09-980-559-1
69: /cgn2_6/ptodata/2/pna/US6013_COMB.seq:US-09-980-559-1
70: /cgn2_6/ptodata/2/pna/US6014_COMB.seq:US-09-980-559-1
71: /cgn2_6/ptodata/2/pna/US6015_COMB.seq:US-09-980-559-1
72: /cgn2_6/ptodata/2/pna/US6016_COMB.seq:US-09-980-559-1
73: /cgn2_6/ptodata/2/pna/US6017_COMB.seq:US-09-980-559-1
74: /cgn2_6/ptodata/2/pna/US6018_COMB.seq:US-09-980-559-1
75: /cgn2_6/ptodata/2/pna/US6019_COMB.seq:US-09-980-559-1
76: /cgn2_6/ptodata/2/pna/US6020_COMB.seq:US-09-980-559-1
77: /cgn2_6/ptodata/2/pna/US6021_COMB.seq:US-09-980-559-1
78: /cgn2_6/ptodata/2/pna/US6022_COMB.seq:US-09-980-559-1
79: /cgn2_6/ptodata/2/pna/US6023A_COMB.seq:US-09-980-559-1
80: /cgn2_6/ptodata/2/pna/US6023B_COMB.seq:US-09-980-559-1
81: /cgn2_6/ptodata/2/pna/US6024_COMB.seq:US-09-980-559-1
82: /cgn2_6/ptodata/2/pna/US6025_COMB.seq:US-09-980-559-1
83: /cgn2_6/ptodata/2/pna/US6026_COMB.seq:US-09-980-559-1
84: /cgn2_6/ptodata/2/pna/US6027_COMB.seq:US-09-980-559-1
85: /cgn2_6/ptodata/2/pna/US6028_COMB.seq:US-09-980-559-1
86: /cgn2_6/ptodata/2/pna/US6029_COMB.seq:US-09-980-559-1
87: /cgn2_6/ptodata/2/pna/US6030_COMB.seq:US-09-980-559-1
88: /cgn2_6/ptodata/2/pna/US6031_COMB.seq:US-09-980-559-1
89: /cgn2_6/ptodata/2/pna/US6032_COMB.seq:US-09-980-559-1
90: /cgn2_6/ptodata/2/pna/US6033_COMB.seq:US-09-980-559-1
91: /cgn2_6/ptodata/2/pna/US6034_COMB.seq:US-09-980-559-1
92: /cgn2_6/ptodata/2/pna/US6035_COMB.seq:US-09-980-559-1
93: /cgn2_6/ptodata/2/pna/US6036_COMB.seq:US-09-980-559-1
94: /cgn2_6/ptodata/2/pna/US6037_COMB.seq:US-09-980-559-1
95: /cgn2_6/ptodata/2/pna/US6038_COMB.seq:US-09-980-559-1
96: /cgn2_6/ptodata/2/pna/US6039_COMB.seq:US-09-980-559-1
97: /cgn2_6/ptodata/2/pna/US6040_COMB.seq:US-09-980-559-1
98: /cgn2_6/ptodata/2/pna/US6041_COMB.seq:US-09-980-559-1
99: /cgn2_6/ptodata/2/pna/US6042_COMB.seq:US-09-980-559-1
100: /cgn2_6/ptodata/2/pna/US6043_COMB.seq:US-09-980-559-1
101: /cgn2_6/ptodata/2/pna/US6044_COMB.seq:US-09-980-559-1
102: /cgn2_6/ptodata/2/pna/US6045_COMB.seq:US-09-980-559-1
103: /cgn2_6/ptodata/2/pna/US6046_COMB.seq:US-09-980-559-1
104: /cgn2_6/ptodata/2/pna/US6047_COMB.seq:US-09-980-559-1
105: /cgn2_6/ptodata/2/pna/US6048_COMB.seq:US-09-980-559-1
106: /cgn2_6/ptodata/2/pna/US6049_COMB.seq:US-09-980-559-1
107: /cgn2_6/ptodata/2/pna/US6050_COMB.seq:US-09-980-559-1
108: /cgn2_6/ptodata/2/pna/US6051_COMB.seq:US-09-980-559-1
109: /cgn2_6/ptodata/2/pna/US6052_COMB.seq:US-09-980-559-1
110: /cgn2_6/ptodata/2/pna/US6053_COMB.seq:US-09-980-559-1

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

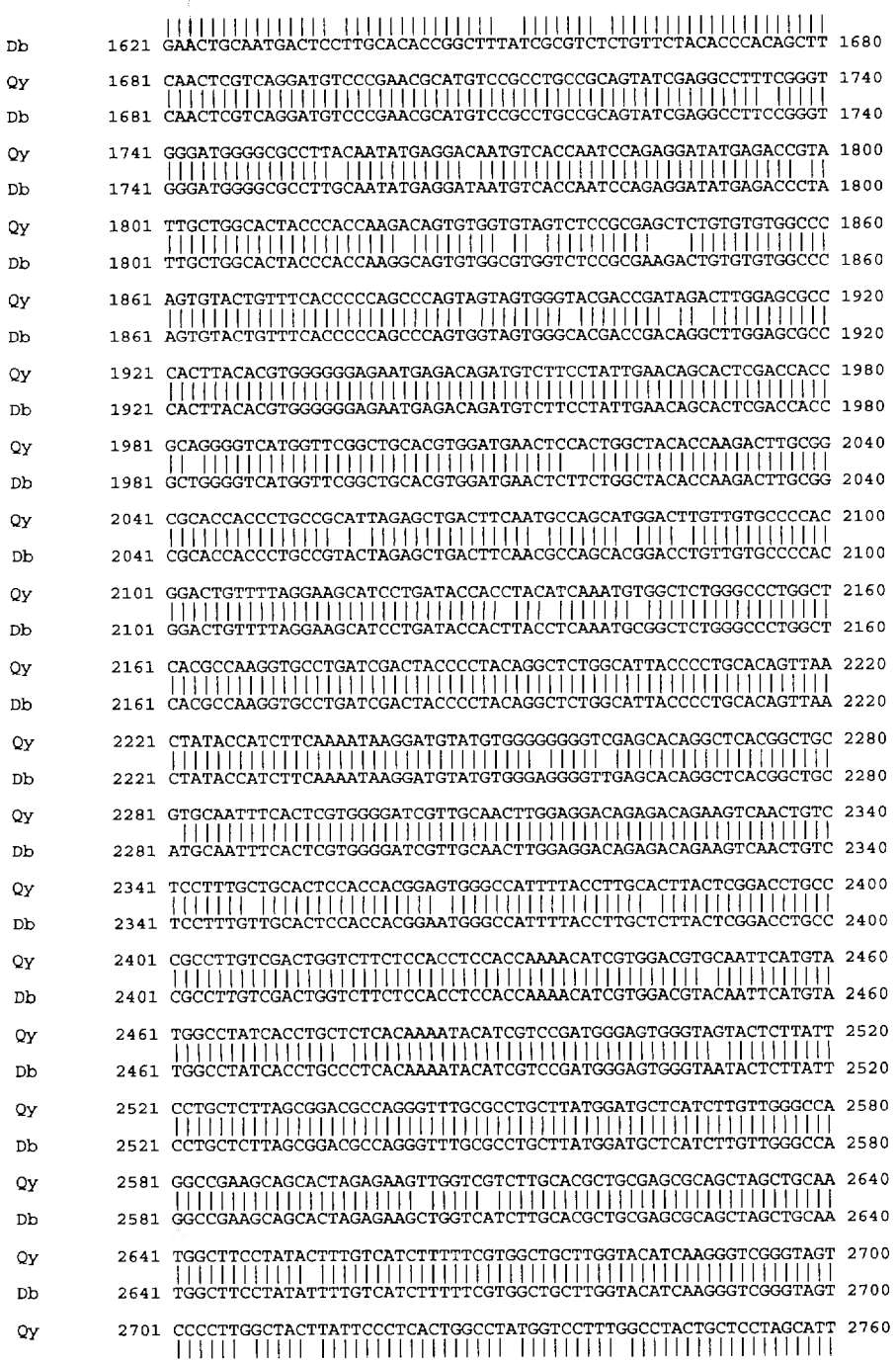
Result No.	Score	% Query Match	Length	DB	ID	Description
1	8970.38	93.5	9711	42	US-09-980-559-1	Sequence 1, Appli

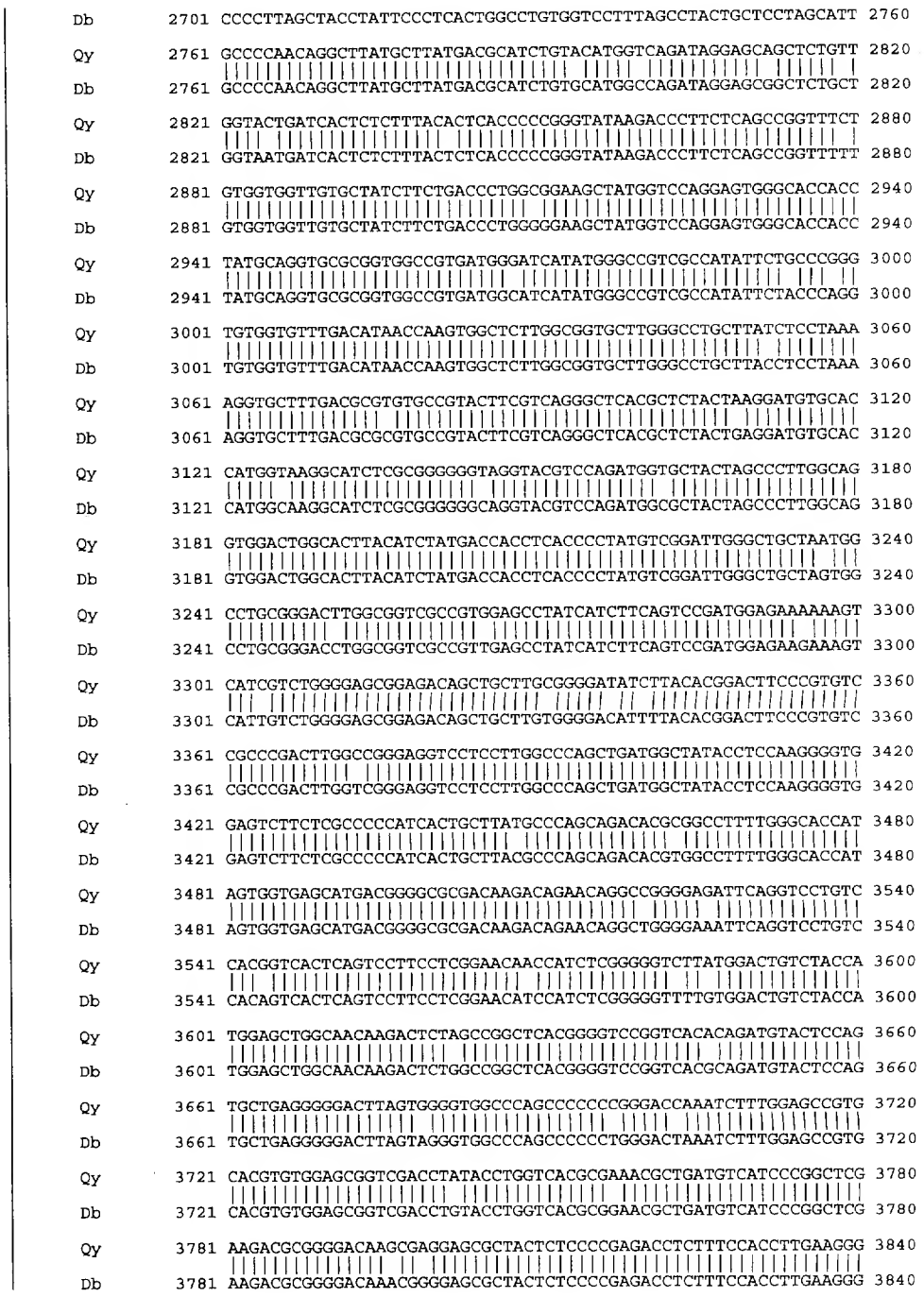
ALIGNMENTS

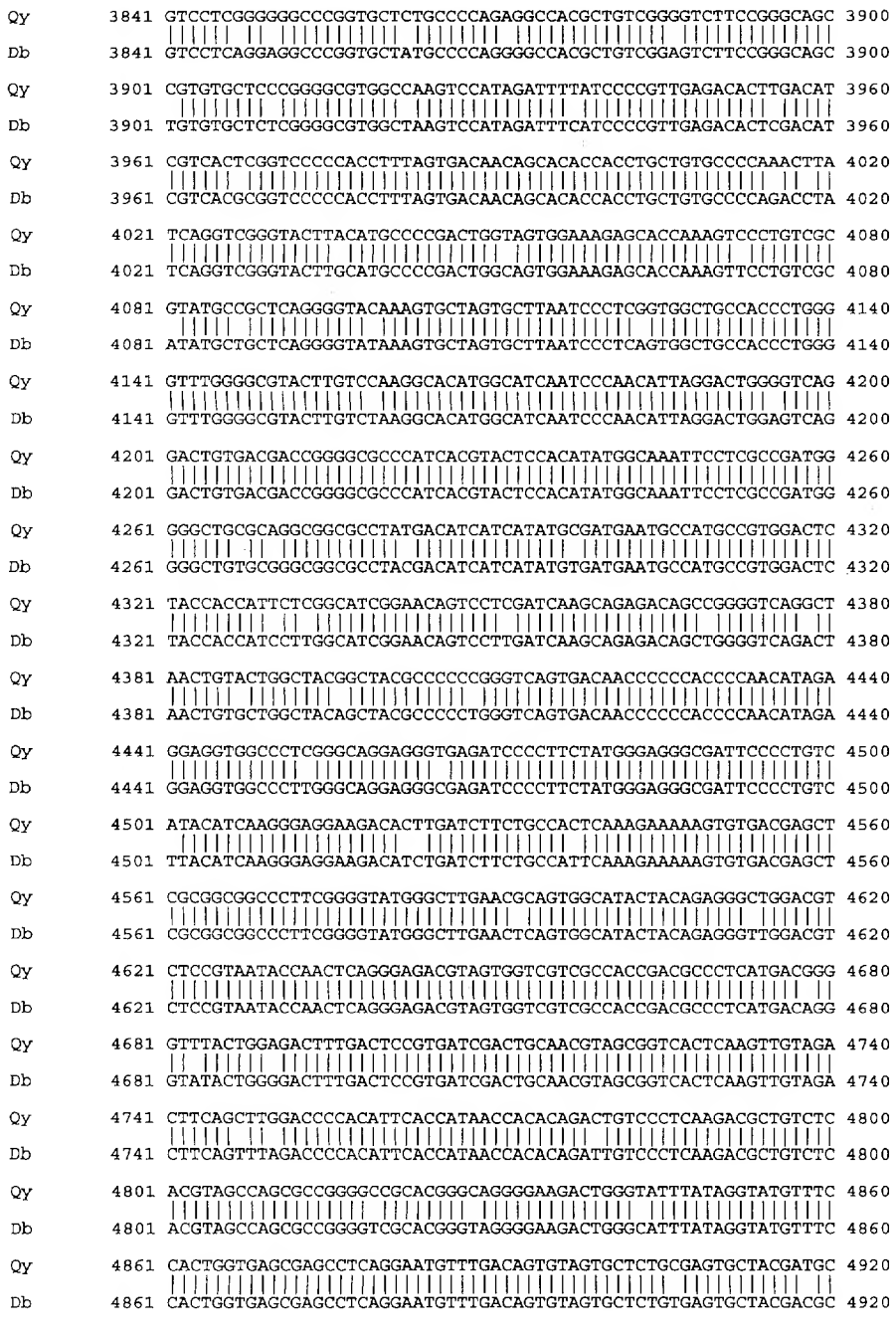
RESULT 1
US-09-980-559-1
; Sequence 1, Application US/09980559
; GENERAL INFORMATION:
; APPLICANT: Yanagi, Masayuki
; APPLICANT: Emerson, Suzanne
; APPLICANT: Bukh, Jens
; APPLICANT: Purcell, Robert
; TITLE OF INVENTION: Cloned Genome of Infectious Hepatitis C Viruses of
; TITLE OF INVENTION: Genotype 2a and Uses Thereof
; FILE REFERENCE: 20264302PC
; CURRENT APPLICATION NUMBER: US/09/980,559
; CURRENT FILING DATE: 2000-06-02
; PRIOR APPLICATION NUMBER: 60/137,693
; PRIOR FILING DATE: 1999-06-04
; NUMBER OF SEQ ID NOS: 39
; SOFTWARE: PatentIn Ver. 2.1
; SEQ ID NO 1
; LENGTH: 9711
; TYPE: DNA
; ORGANISM: Hepatitis C virus
US-09-980-559-1

Query Match 93.5%; Score 8970.38; DB 42; Length 9711;
Best Local Similarity 96.0%; Pred. No. 0;
Matches 9202; Conservative 0; Mismatches 386; Indels 0; Gaps 0;

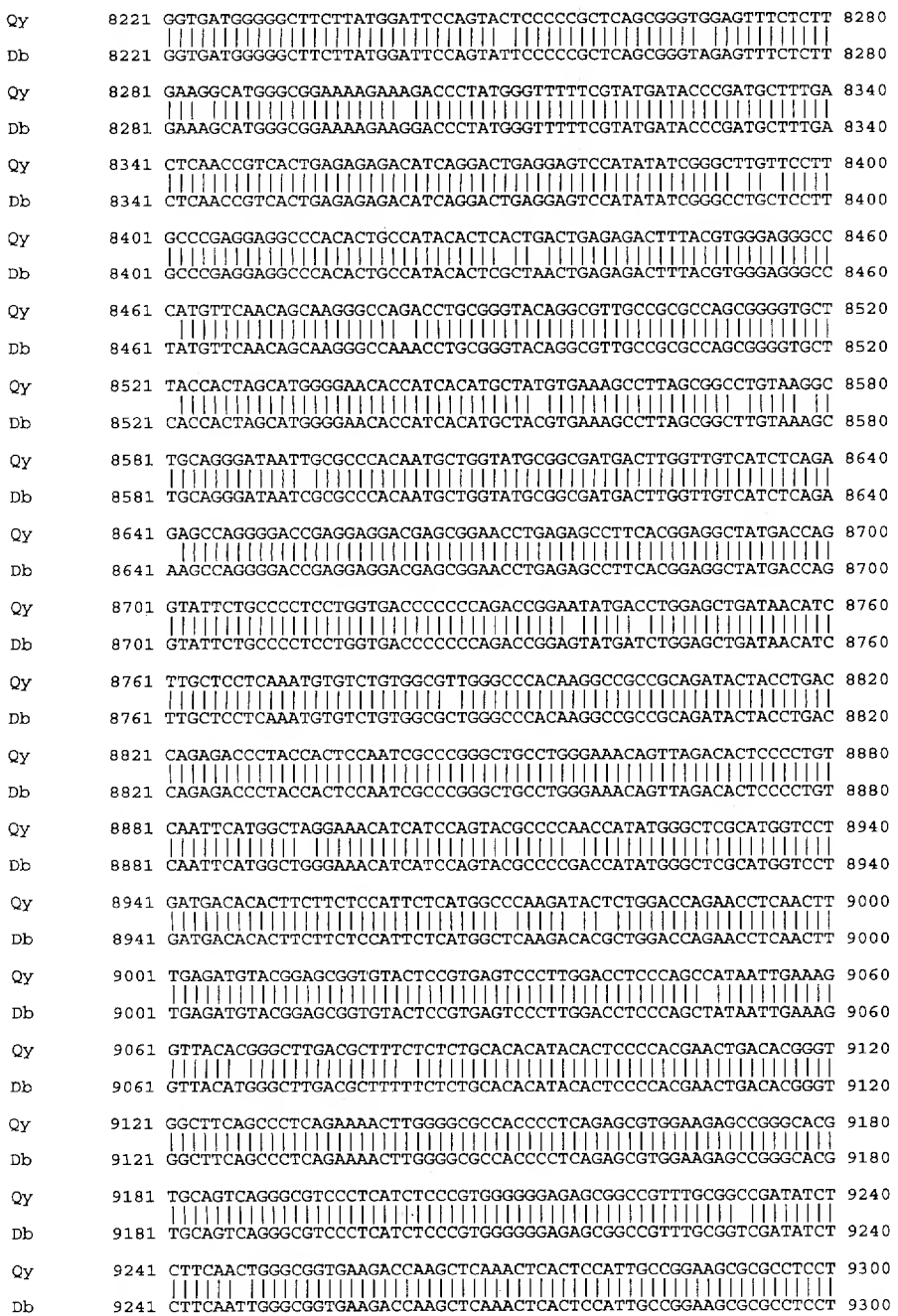
```
Qy          1 ACCCGCCCCTAATAGGGGCGACACTCCGCCATGAACCACTCCCCTGTGAGGAACTACTGT 60
              |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db          1 ACCCGCCCCTAATAGGGGCGACACTCCGCCATGAATCACTCCCCTGTGAGGAACTACTGT 60

Qy         61 CTTCACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTACAGCCTCCAGGCCC 120
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db         61 CTTCACGCAGAAAGCGTCTAGCCATGGCGTTAGTATGAGTGTCGTACAGCCTCCAGGCCC 120

Qy        121 CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCCGGG 180
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        121 CCCCCTCCCGGGAGAGCCATAGTGGTCTGCGGAACCGGTGAGTACACCGGAATTGCCGGG 180

Qy        181 AAGACTGGGTCCTTTCTTGGATAAACCCACTCTATGCCCGGTCATTTGGGCGTGCCCCCG 240
              |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db        181 AAGACTGGGTCCTTTCTTGGATAAACCCACTCTATGCCCGGCCATTTGGGCGTGCCCCCG 240

Qy        241 CAAGACTGCTAGCCGAGTAGCGTTGGGTTGCGAAAGGCCTTGTGGTACTGCCTGATAGGG 300
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        241 CAAGACTGCTAGCCGAGTAGCGTTGGGTTGCGAAAGGCCTTGTGGTACTGCCTGATAGGG 300

Qy        301 TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACAAATCCTAAACC 360
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        301 TGCTTGCGAGTGCCCCGGGAGGTCTCGTAGACCGTGCACCATGAGCACAAATCCTAAACC 360

Qy        361 TCAAAGAAAAACCAAAAGAAACACCAACCGTCGCCCACAAGACGTTAAGTTTCCGGGCGG 420
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        361 TCAAAGAAAAACCAAAAGAAACACCAACCGTCGCCCACAAGACGTTAAGTTTCCGGGCGG 420

Qy        421 CGGCCAGATCGTTGGCGGAGTATACTTGTTGCCGCGCAGGGGCCCCAGGTTGGGTGTGCG 480
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        421 CGGCCAGATCGTTGGCGGAGTATACTTGTTGCCGCGCAGGGGCCCCAGGTTGGGTGTGCG 480

Qy        481 CGCGACAAGGAAGACTTCGGAGCGGTCCCAGCCACGTGGAAGGCGCCAGCCCATCCCTAA 540
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        481 CGCGACAAGGAAGACTTCGGAGCGGTCCCAGCCACGTGGAAGGCGCCAGCCCATCCCTAA 540

Qy        541 GGATCGGCGCTCCACTGGCAAATCCTGGGGAAAACCAGGATACCCCTGGCCCCTATACGG 600
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        541 AGATCGGCGCTCCACTGGCAAATCCTGGGGAAAACCAGGATACCCCTGGCCCCTATACGG 600

Qy        601 GAATGAGGGACTCGGCTGGGCAGGATGGCTCCTGTCCCCCCGAGGTTCCCGTCCCTCTTG 660
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        601 GAATGAGGGACTCGGCTGGGCAGGATGGCTCCTGTCCCCCCGAGGTTCCCGTCCCTCTTG 660

Qy        661 GGGCCCCAATGACCCCCGGCATAGGTCCCGCAACGTGGGTAAGGTCATCGATACCCTAAC 720
              |||||||||||||||||||||||||||||| ||||||||||||||||||||||||||||
Db        661 GGGCCCCAATGACCCCCGGCATAGGTCGCGCAACGTGGGTAAGGTCATCGATACCCTAAC 720

Qy        721 GTGCGGCTTTGCCGACCTCATGGGGTACATCCCTGTCGTAGGCGCCCCGCTCGGCGGCGT 780
              |||||||||||||||||||||||||||||||||||| ||||||||||||||||||||||
Db        721 GTGCGGCTTTGCCGACCTCATGGGGTACATCCCTGTCGTGGGCGCCCCGCTCGGCGGCGT 780

Qy        781 CGCCAGAGCTCTCGCGCATGGCGTGAGAGTCCTGGAGGACGGGGTTAATTTTGCAACAGG 840
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        781 CGCCAGAGCTCTCGCGCATGGCGTGAGAGTCCTGGAGGACGGGGTTAATTTTGCAACAGG 840

Qy        841 GAACTTACCCGGTTGCTCCTTTTCTATCTTCTTGCTGGCCCTGCTGTCCTGCATCACCAC 900
              ||||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db        841 GAACTTACCCGGTTGCTCCTTTTCTATCTTCTTGCTGGCCCTGCTGTCCTGCATCACCAC 900

Qy        901 CCCGGTCTCCGCTGCCGAAGTGAAGAACATCAGTACCGGCTACATGGTGACCAACGACTG 960
              |||||||||||||||||||||||||||||||||||||||||||||||| ||||||||||
Db        901 CCCGGTCTCCGCTGCCGAAGTGAAGAACATCAGTACCGGCTACATGGTGACTAACGACTG 960

Qy        961 CACCAATGATAGCATTACCTGGCAACTCCAGGCTGCTGTCCTCCACGTCCCCGGGTGCGT 1020
              |||||||| ||||||||||||||| ||||||||||||||||||||||||||||||||||
Db        961 CACCAATGACAGCATTACCTGGCAGCTCCAGGCTGCTGTCCTCCACGTCCCCGGGTGCGT 1020

Qy       1021 CCCGTGCGAGAAAGTGGGGAATACATCTCGGTGCTGGATACCGGTCTCACCGAATGTGGC 1080
              |||||||||||||||||| |||||| ||||||||||||||||||||||||||||||||||
Db       1021 CCCGTGCGAGAAAGTGGGGAATGCATCTCAGTGCTGGATACCGGTCTCACCGAATGTGGC 1080

Qy       1081 CGTGCAGCAGCCCGGCGCCCTCACGCAGGGCTTACGGACGCACATTGACATGGTTGTGAT 1140
              |||||||| |||||||||||||||||||||||| |||||||||| ||||||||||||||||
Db       1081 CGTGCAGCGGCCCGGCGCCCTCACGCAGGGCTTGCGGACGCACATCGACATGGTTGTGAT 1140

Qy       1141 GTCCGCCACGCTCTGCTCCGCTCTTTACGTGGGGGACCTCTGCGGTGGGGTGATGCTTGC 1200
              |||||||||||||||| || || |||||||||||||||||||||||||||||| ||
Db       1141 GTCCGCCACGCTCTGCTCTGCCCTCTACGTGGGGGACCTCTGCGGTGGGGTGATGCTCGC 1200

Qy       1201 AGCCCAGATGTTCATTGTCTCGCCACAGCACCACTGGTTTGTGCAAGACTGCAATTGCTC 1260
              |||||| |||||||||||||||| |||||||||||||||| ||||||||||||||||||
Db       1201 AGCCCAAATGTTCATTGTCTCGCCGCAGCACCACTGGTTTGTCCAAGACTGCAATTGCTC 1260

Qy       1261 CATCTACCCTGGTACCATCACTGGACACCGCATGGCGTGGGACATGATGATGAACTGGTC 1320
              |||||||||||||||||||||||||||||||||||||||||||||||||||||||||||
Db       1261 CATCTACCCTGGTACCATCACTGGACACCGCATGGCATGGGACATGATGATGAACTGGTC 1320

Qy       1321 GCCCACGGCTACCATGATCCTGGCGTACGCGATGCGCGTCCCCGAGGTCATCATAGACAT 1380
              |||||||||||||||||| |||||||||||||||| |||||||||||| ||||||||
Db       1321 GCCCACGGCTACCATGATCTTGGCGTACGCGATGCGTGTCCCCGAGGTCATTATAGACAT 1380

Qy       1381 CATTGGCGGGGCTCATTGGGGCGTCATGTTCGGCTTAGCCTACTTCTCTATGCAGGGAGC 1440
              |||| |||||||||||||||||||||||||||||| |||||||||||||||||||||||
Db       1381 CATTAGCGGGGCTCATTGGGGCGTCATGTTCGGCTTGGCCTACTTCTCTATGCAGGGAGC 1440

Qy       1441 GTGGGCAAAAGTCGTTGTCATTCTTTTGCTGGCCGCCGGGGTGGACGCGCAAACCCATAC 1500
              |||||| |||||||||||||||| ||| || |||||||||||||||||| ||||||||
Db       1441 GTGGGCGAAAGTCGTTGTCATCCTTCTGTTGGCCGCCGGGGTGGACGCGCGCACCCATAC 1500

Qy       1501 CGTTGGGGGTTCTACCGCGCATAACGCCAGGACCCTCACCGGCATGTTCTCCCTTGGTGC 1560
              |||||||||||| ||||||| | | || || ||||||| || | || | | || |
Db       1501 TGTTGGGGGTTCTGCCGCGCAGACCACCGGGCGCCTCACCAGCTTATTTGACATGGGCCC 1560

Qy       1561 CAGGCAGAAAATCCAGCTCATCAACACCAATGGCAGTTGGCACATCAACCGCACCGCCCT 1620
              |||||||||||||||||| | |||||||||||||| |||||||||||||||||||||||
Db       1561 CAGGCAGAAAATCCAGCTCGTTAACACCAATGGCAGCTGGCACATCAACCGCACCGCCCT 1620

Qy       1621 GAACTGCAATGACTCTTTGCACACCGGCTTCCTCGCGTCACTGTTCTACACCCACAGCTT 1680
```

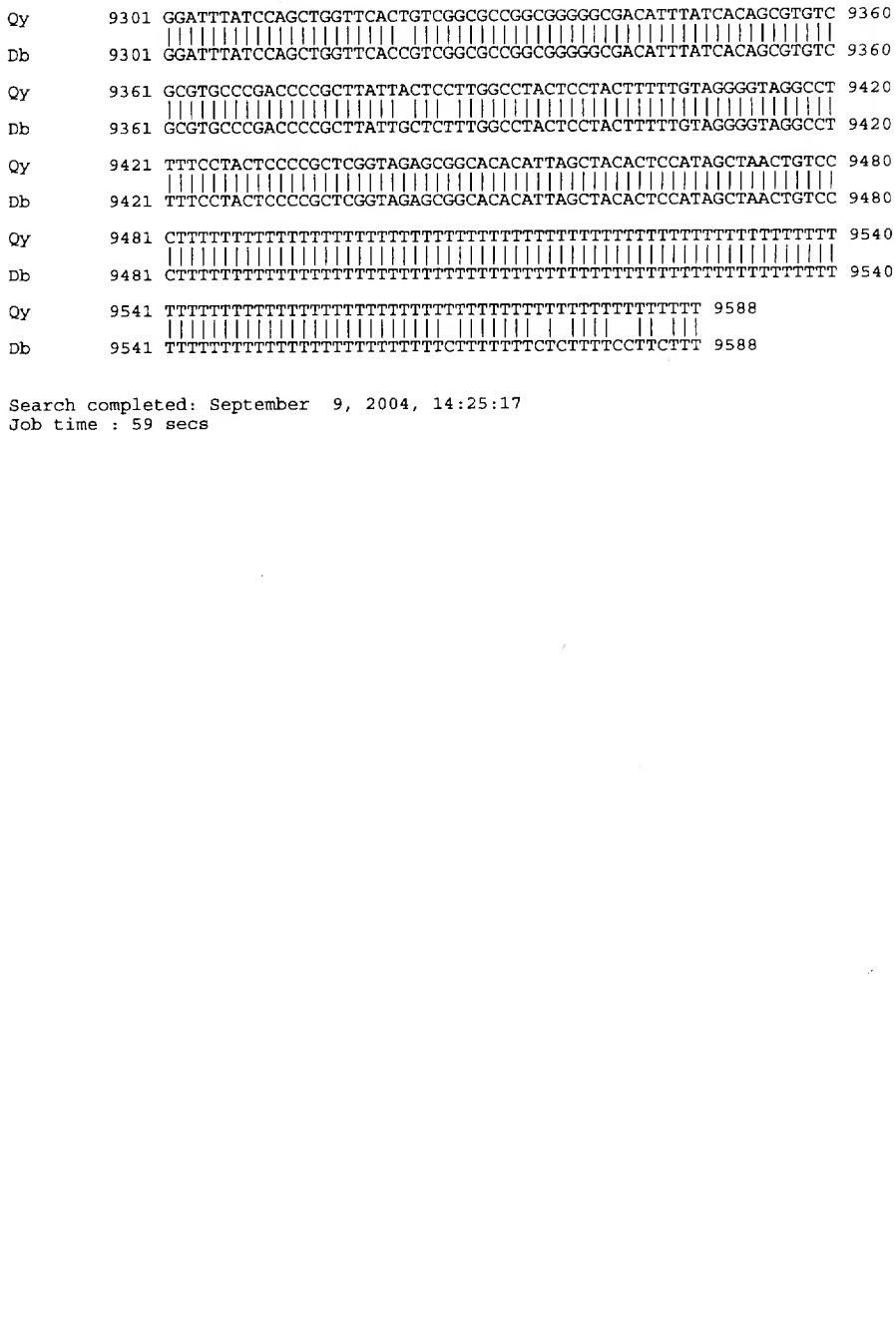

Db 1621 GAACTGCAATGACTCCTTGCACACCGGCTTTATCGCGTCTCTGTTCTACACCCACAGCTT 1680
Qy 1681 CAACTCGTCAGGATGTCCCGAACGCATGTCCGCCTGCCGCAGTATCGAGGCCTTTCGGGT 1740
Db 1681 CAACTCGTCAGGATGTCCCGAACGCATGTCCGCCTGCCGCAGTATCGAGGCCTTCCGGGT 1740
Qy 1741 GGGATGGGGCGCCTTACAATATGAGGACAATGTCACCAATCCAGAGGATATGAGACCGTA 1800
Db 1741 GGGATGGGGCGCCTTGCAATATGAGGATAATGTCACCAATCCAGAGGATATGAGACCCTA 1800
Qy 1801 TTGCTGGCACTACCCACCAAGACAGTGTGGTGTAGTCTCCGCGAGCTCTGTGTGTGGCCC 1860
Db 1801 TTGCTGGCACTACCCACCAAGGCAGTGTGGCGTGGTCTCCGCGAAGACTGTGTGTGGCCC 1860
Qy 1861 AGTGTACTGTTTCACCCCCAGCCCAGTAGTAGTGGGTACGACCGATAGACTTGGAGCGCC 1920
Db 1861 AGTGTACTGTTTCACCCCCAGCCCAGTGGTAGTGGGCACGACCGACAGGCTTGGAGCGCC 1920
Qy 1921 CACTTACACGTGGGGGGGAGAATGAGACAGATGTCTTCCTATTGAACAGCACTCGACCACC 1980
Db 1921 CACTTACACGTGGGGGGAGAATGAGACAGATGTCTTCCTATTGAACAGCACTCGACCACC 1980
Qy 1981 GCAGGGGTCATGGTTCGGCTGCACGTGGATGAACTCCACTGGCTACACCAAGACTTGCGG 2040
Db 1981 GCTGGGGTCATGGTTCGGCTGCACGTGGATGAACTCTTCTGGCTACACCAAGACTTGCGG 2040
Qy 2041 CGCACCACCCTGCCGCATTAGAGCTGACTTCAATGCCAGCATGGACTTGTTGTGCCCCAC 2100
Db 2041 CGCACCACCCTGCCGTACTAGAGCTGACTTCAACGCCAGCACGGACCTGTTGTGCCCCAC 2100
Qy 2101 GGACTGTTTTAGGAAGCATCCTGATACCACCTACATCAAATGTGGCTCTGGGCCCTGGCT 2160
Db 2101 GGACTGTTTTAGGAAGCATCCTGATACCACTTACCTCAAATGCGGCTCTGGGCCCTGGCT 2160
Qy 2161 CACGCCAAGGTGCCTGATCGACTACCCCTACAGGCTCTGGCATTACCCCTGCACAGTTAA 2220
Db 2161 CACGCCAAGGTGCCTGATCGACTACCCCTACAGGCTCTGGCATTACCCCTGCACAGTTAA 2220
Qy 2221 CTATACCATCTTCAAAATAAGGATGTATGTGGGGGGGGTCGAGCACAGGCTCACGGCTGC 2280
Db 2221 CTATACCATCTTCAAAATAAGGATGTATGTGGGAGGGGTTGAGCACAGGCTCACGGCTGC 2280
Qy 2281 GTGCAATTTCACTCGTGGGGATCGTTGCAACTTGGAGGACAGAGACAGAAGTCAACTGTC 2340
Db 2281 ATGCAATTTCACTCGTGGGGATCGTTGCAACTTGGAGGACAGAGACAGAAGTCAACTGTC 2340
Qy 2341 TCCTTTGCTGCACTCCACCACGGAGTGGGCCATTTTACCTTGCACTTACTCGGACCTGCC 2400
Db 2341 TCCTTTGTTGCACTCCACCACGGAATGGGCCATTTTACCTTGCTCTTACTCGGACCTGCC 2400
Qy 2401 CGCCTTGTCGACTGGTCTTCTCCACCTCCACCAAAACATCGTGGACGTGCAATTCATGTA 2460
Db 2401 CGCCTTGTCGACTGGTCTTCTCCACCTCCACCAAAACATCGTGGACGTACAATTCATGTA 2460
Qy 2461 TGGCCTATCACCTGCTCTCACAAAATACATCGTCCGATGGGAGTGGGTAGTACTCTTATT 2520
Db 2461 TGGCCTATCACCTGCCCTCACAAAATACATCGTCCGATGGGAGTGGGTAATACTCTTATT 2520
Qy 2521 CCTGCTCTTAGCGGACGCCAGGGTTTGCGCCTGCTTATGGATGCTCATCTTGTTGGGCCA 2580
Db 2521 CCTGCTCTTAGCGGACGCCAGGGTTTGCGCCTGCTTATGGATGCTCATCTTGTTGGGCCA 2580
Qy 2581 GGCCGAAGCAGCACTAGAGAAGTTGGTCGTCTTGCACGCTGCGAGCGCAGCTAGCTGCAA 2640
Db 2581 GGCCGAAGCAGCACTAGAGAAGCTGGTCATCTTGCACGCTGCGAGCGCAGCTAGCTGCAA 2640
Qy 2641 TGGCTTCCTATACTTTGTCATCTTTTTCGTGGCTGCTTGGTACATCAAGGGTCGGGTAGT 2700
Db 2641 TGGCTTCCTATATTTTGTCATCTTTTTCGTGGCTGCTTGGTACATCAAGGGTCGGGTAGT 2700
Qy 2701 CCCCTTGGCTACTTATTCCCTCACTGGCCTATGGTCCTTTGGCCTACTGCTCCTAGCATT 2760


Db 2701 CCCCTTAGCTACCTATTCCCTCACTGGCCTGTGGTCCTTTAGCCTACTGCTCCTAGCATT 2760
Qy 2761 GCCCCAACAGGCTTATGCTTATGACGCATCTGTACATGGTCAGATAGGAGCAGCTCTGTT 2820
Db 2761 GCCCCAACAGGCTTATGCTTATGACGCATCTGTGCATGGCCAGATAGGAGCGGCTCTGCT 2820
Qy 2821 GGTACTGATCACTCTCTTTACACTCACCCCCGGGTATAAGACCCTTCTCAGCCGGTTTCT 2880
Db 2821 GGTAATGATCACTCTCTTTACTCTCACCCCCGGGTATAAGACCCTTCTCAGCCGGTTTTT 2880
Qy 2881 GTGGTGGTTGTGCTATCTTCTGACCCTGGCGGAAGCTATGGTCCAGGAGTGGGCACCACC 2940
Db 2881 GTGGTGGTTGTGCTATCTTCTGACCCTGGGGGAAGCTATGGTCCAGGAGTGGGCACCACC 2940
Qy 2941 TATGCAGGTGCGCGGTGGCCGTGATGGGATCATATGGGCCGTCGCCATATTCTGCCCGGG 3000
Db 2941 TATGCAGGTGCGCGGTGGCCGTGATGGCATCATATGGGCCGTCGCCATATTCTACCCAGG 3000
Qy 3001 TGTGGTGTTTGACATAACCAAGTGGCTCTTGGCGGTGCTTGGGCCTGCTTATCTCCTAAA 3060
Db 3001 TGTGGTGTTTGACATAACCAAGTGGCTCTTGGCGGTGCTTGGGCCTGCTTACCTCCTAAA 3060
Qy 3061 AGGTGCTTTGACGCGTGTGCCGTACTTCGTCAGGGCTCACGCTCTACTAAGGATGTGCAC 3120
Db 3061 AGGTGCTTTGACGCGCGTGCCGTACTTCGTCAGGGCTCACGCTCTACTGAGGATGTGCAC 3120
Qy 3121 CATGGTAAGGCATCTCGCGGGGGGTAGGTACGTCCAGATGGTGCTACTAGCCCTTGGCAG 3180
Db 3121 CATGGCAAGGCATCTCGCGGGGGGCAGGTACGTCCAGATGGCGCTACTAGCCCTTGGCAG 3180
Qy 3181 GTGGACTGGCACTTACATCTATGACCACCTCACCCCTATGTCGGATTGGGCTGCTAATGG 3240
Db 3181 GTGGACTGGCACTTACATCTATGACCACCTCACCCCTATGTCGGATTGGGCTGCTAGTGG 3240
Qy 3241 CCTGCGGGACTTGGCGGTCGCCGTGGAGCCTATCATCTTCAGTCCGATGGAGAAAAAAGT 3300
Db 3241 CCTGCGGGACCTGGCGGTCGCCGTTGAGCCTATCATCTTCAGTCCGATGGAGAAGAAAGT 3300
Qy 3301 CATCGTCTGGGGAGCGGAGACAGCTGCTTGCGGGGATATCTTACACGGACTTCCCGTGTC 3360
Db 3301 CATTGTCTGGGGAGCGGAGACAGCTGCTTGTGGGGACATTTTACACGGACTTCCCGTGTC 3360
Qy 3361 CGCCCGACTTGGCCGGGAGGTCCTCCTTGGCCCAGCTGATGGCTATACCTCCAAGGGGTG 3420
Db 3361 CGCCCGACTTGGTCGGGAGGTCCTCCTTGGCCCAGCTGATGGCTATACCTCCAAGGGGTG 3420
Qy 3421 GAGTCTTCTCGCCCCCATCACTGCTTATGCCCAGCAGACACGCGGCCTTTTGGGCACCAT 3480
Db 3421 GAGTCTTCTCGCCCCCATCACTGCTTACGCCCAGCAGACACGTGGCCTTTTGGGCACCAT 3480
Qy 3481 AGTGGTGAGCATGACGGGGCGCGACAAGACAGAACAGGCCGGGGAGATTCAGGTCCTGTC 3540
Db 3481 AGTGGTGAGCATGACGGGGCGCGACAAGACAGAACAGGCTGGGGAAATTCAGGTCCTGTC 3540
Qy 3541 CACGGTCACTCAGTCCTTCCTCGGAACAACCATCTCGGGGGTCTTATGGACTGTCTACCA 3600
Db 3541 CACAGTCACTCAGTCCTTCCTCGGAACATCCATCTCGGGGGTTTTGTGGACTGTCTACCA 3600
Qy 3601 TGGAGCTGGCAACAAGACTCTAGCCGGCTCACGGGGTCCGGTCACACAGATGTACTCCAG 3660
Db 3601 TGGAGCTGGCAACAAGACTCTGGCCGGCTCACGGGGTCCGGTCACGCAGATGTACTCCAG 3660
Qy 3661 TGCTGAGGGGGACTTAGTGGGGTGGCCCAGCCCCCCCGGGACCAAATCTTTGGAGCCGTG 3720
Db 3661 TGCTGAGGGGGACTTAGTAGGGTGGCCCAGCCCCCCTGGGACTAAATCTTTGGAGCCGTG 3720
Qy 3721 CACGTGTGGAGCGGTCGACCTATACCTGGTCACGCGAAACGCTGATGTCATCCCGGCTCG 3780
Db 3721 CACGTGTGGAGCGGTCGACCTGTACCTGGTCACGCGGAACGCTGATGTCATCCCGGCTCG 3780
Qy 3781 AAGACGCGGGGACAAGCGAGGAGCGCTACTCTCCCCGAGACCTCTTTCCACCTTGAAGGG 3840
Db 3781 AAGACGCGGGGACAAACGGGGAGCGCTACTCTCCCCGAGACCTCTTTCCACCTTGAAGGG 3840


Qy 3841 GTCCTCGGGGGGCCCGGTGCTCTGCCCCAGAGGCCACGCTGTCGGGGTCTTCCGGGCAGC 3900
Db 3841 GTCCTCAGGAGGCCCGGTGCTATGCCCCAGGGGCCACGCTGTCGGAGTCTTCCGGGCAGC 3900
Qy 3901 CGTGTGCTCCCGGGGCGTGGCCAAGTCCATAGATTTTATCCCCGTTGAGACACTTGACAT 3960
Db 3901 TGTGTGCTCTCGGGGCGTGGCTAAGTCCATAGATTTCATCCCCGTTGAGACACTCGACAT 3960
Qy 3961 CGTCACTCGGTCCCCCACCTTTAGTGACAACAGCACACCACCTGCTGTGCCCCAAACTTA 4020
Db 3961 CGTCACGCGGTCCCCCACCTTTAGTGACAACAGCACACCACCTGCTGTGCCCCAGACCTA 4020
Qy 4021 TCAGGTCGGGTACTTACATGCCCCGACTGGTAGTGGAAAGAGCACCAAAGTCCCTGTCGC 4080
Db 4021 TCAGGTCGGGTACTTGCATGCCCCGACTGGCAGTGGAAAGAGCACCAAAGTTCCTGTCGC 4080
Qy 4081 GTATGCCGCTCAGGGGTACAAAGTGCTAGTGCTTAATCCCTCGGTGGCTGCCACCCTGGG 4140
Db 4081 ATATGCTGCTCAGGGGTATAAAGTGCTAGTGCTTAATCCCTCAGTGGCTGCCACCCTGGG 4140
Qy 4141 GTTTGGGGCGTACTTGTCCAAGGCACATGGCATCAATCCCAACATTAGGACTGGGGTCAG 4200
Db 4141 GTTTGGGGCGTACTTGTCTAAGGCACATGGCATCAATCCCAACATTAGGACTGGAGTCAG 4200
Qy 4201 GACTGTGACGACCGGGGCGCCCATCACGTACTCCACATATGGCAAATTCCTCGCCGATGG 4260
Db 4201 GACTGTGACGACCGGGGCGCCCATCACGTACTCCACATATGGCAAATTCCTCGCCGATGG 4260
Qy 4261 GGGCTGCGCAGGCGGCGCCTATGACATCATCATATGCGATGAATGCCATGCCGTGGACTC 4320
Db 4261 GGGCTGTGCGGGCGGCGCCTACGACATCATCATATGTGATGAATGCCATGCCGTGGACTC 4320
Qy 4321 TACCACCATTCTCGGCATCGGAACAGTCCTCGATCAAGCAGAGACAGCCGGGGTCAGGCT 4380
Db 4321 TACCACCATCCTTGGCATCGGAACAGTCCTTGATCAAGCAGAGACAGCTGGGGTCAGACT 4380
Qy 4381 AACTGTACTGGCTACGGCTACGCCCCCCGGGTCAGTGACAACCCCCCACCCCAACATAGA 4440
Db 4381 AACTGTGCTGGCTACAGCTACGCCCCCTGGGTCAGTGACAACCCCCCACCCCAACATAGA 4440
Qy 4441 GGAGGTGGCCCTCGGGCAGGAGGGTGAGATCCCCTTCTATGGGAGGGCGATTCCCCTGTC 4500
Db 4441 GGAGGTGGCCCTTGGGCAGGAGGGCGAGATCCCCTTCTATGGGAGGGCGATTCCCCTGTC 4500
Qy 4501 ATACATCAAGGGAGGAAGACACTTGATCTTCTGCCACTCAAAGAAAAAGTGTGACGAGCT 4560
Db 4501 TTACATCAAGGGAGGAAGACATCTGATCTTCTGCCATTCAAAGAAAAAGTGTGACGAGCT 4560
Qy 4561 CGCGGCGGCCCTTCGGGGTATGGGCTTGAACGCAGTGGCATACTACAGAGGGCTGGACGT 4620
Db 4561 CGCGGCGGCCCTTCGGGGTATGGGCTTGAACTCAGTGGCATACTACAGAGGGTTGGACGT 4620
Qy 4621 CTCCGTAATACCAACTCAGGGAGACGTAGTGGTCGTCGCCACCGACGCCCTCATGACGGG 4680
Db 4621 CTCCGTAATACCAACTCAGGGAGACGTAGTGGTCGTCGCCACCGACGCCCTCATGACAGG 4680
Qy 4681 GTTTACTGGAGACTTTGACTCCGTGATCGACTGCAACGTAGCGGTCACTCAAGTTGTAGA 4740
Db 4681 GTATACTGGGGACTTTGACTCCGTGATCGACTGCAACGTAGCGGTCACTCAAGTTGTAGA 4740
Qy 4741 CTTCAGCTTGGACCCCACATTCACCATAACCACACAGACTGTCCCTCAAGACGCTGTCTC 4800
Db 4741 CTTCAGTTTAGACCCCACATTCACCATAACCACACAGATTGTCCCTCAAGACGCTGTCTC 4800
Qy 4801 ACGTAGCCAGCGCCGGGGCCGCACGGGCAGGGGAAGACTGGGTATTTATAGGTATGTTTC 4860
Db 4801 ACGTAGCCAGCGCCGGGGTCGCACGGGTAGGGGAAGACTGGGCATTTATAGGTATGTTTC 4860
Qy 4861 CACTGGTGAGCGAGCCTCAGGAATGTTTGACAGTGTAGTGCTCTGCGAGTGCTACGATGC 4920
Db 4861 CACTGGTGAGCGAGCCTCAGGAATGTTTGACAGTGTAGTGCTCTGTGAGTGCTACGACGC 4920
Qy 4921 AGGGGCCGCATGGTATGAGCTCACACCAGCGGAGACCACCGTCAGGCTCAGAGCATATTT 4980
Db 4921 AGGGGCCGCATGGTATGAGCTCACACCATCGGAGACCACCGTCAGGCTCAGGGCGTATTT 4980
Qy 4981 CAACACACCTGGTTTGCCTGTGTGCCAAGACCATCTTGAGTTTTGGGAGGCAGTTTTCAC 5040
Db 4981 CAACACGCCCGGTTTGCCTGTGTGCCAAGACCATCTTGAGTTTTGGGAGGCAGTTTTCAC 5040
Qy 5041 CGGCCTCACACACATAGATGCCCACTTCCTTTCCCAAACAAAGCAATCGGGGGAAAATTT 5100
Db 5041 CGGCCTCACACACATAGATGCCCACTTCCTTTCCCAAACAAAGCAATCGGGGGAAAATTT 5100
Qy 5101 CGCATACTTAACAGCCTACCAGGCTACAGTGTGCGCTAGGGCCAAAGCCCCCCCCCCCGTC 5160
Db 5101 CGCATACTTAACAGCCTACCAGGCTACAGTGTGCGCTAGGGCCAAAGCCCCCCCCCCGTC 5160
Qy 5161 CTGGGACGTCATGTGGAAGTGTTTGACTCGACTCAAGCCCACACTCGTGGGCCCCACACC 5220
Db 5161 CTGGGACGTCATGTGGAAGTGTTTGACTCGACTCAAGCCCACACTCGTGGGCCCCACACC 5220
Qy 5221 TCTCCTGTACCGCTTGGGCTCTGTTACCAACGAGGTCACCCTCACGCATCCTGTGACGAA 5280
Db 5221 TCTCCTGTACCGCTTGGGCTCTGTTACCAACGAGGTCACCCTCACACATCCCGTGACGAA 5280
Qy 5281 ATACATCGCCACCTGCATGCAAGCCGACCTTGAGGTCATGACCAGCACGTGGGTCTTAGC 5340
Db 5281 ATACATCGCCACCTGCATGCAAGCCGACCTTGAGGTCATGACCAGCACATGGGTCTTGGC 5340
Qy 5341 TGGGGGGGTCTTGGCGGCCGTCGCCGCGTACTGCCTGGCGACCGGGTGTGTTTGCATCAT 5400
Db 5341 AGGGGGAGTCTTGGCGGCCGTCGCCGCGTATTGCCTGGCGACCGGGTGTGTTTGCATCAT 5400
Qy 5401 CGGCCGCTTGCACGTTAACCAGCGAGCCGTCGTTGCACCGGACAAGGAGGTCCTCTATGA 5460
Db 5401 CGGCCGCTTGCACATTAACCAGCGAGCCGTCGTTGCGCCGGACAAGGAGGTCCTCTATGA 5460
Qy 5461 GGCTTTTGATGAGATGGAGGAATGTGCCTCTAGAGCGGCTCTCATTGAAGAGGGGCAGCG 5520
Db 5461 GGCTTTTGATGAGATGGAGGAATGTGCCTCTAGGGCGGCTCTCATTGAAGAGGGGCAGCG 5520
Qy 5521 GATAGCCGAGATGCTGAAGTCCAAGATCCAAGGCTTATTGCAGCAAGCTTCCAAACAAGC 5580
Db 5521 GATAGCCGAGATGCTGAAGTCCAAGATCCAAGGCTTATTGCAGCAAGCTTCCAAACAAGC 5580
Qy 5581 TCAAGACATACAACCCGCTGTGCAGGCTTCTTGGCCCAAGGTAGAGCAATTCTGGGCCAA 5640
Db 5581 TCAAGACATACAACCCACTGTGCAGGCTTCATGGCCCAAGGTAGAACAATTCTGGGCCAA 5640
Qy 5641 ACACATGTGGAACTTCATCAGCGGCATTCAATACCTCGCAGGACTATCAACACTGCCAGG 5700
Db 5641 ACACATGTGGAACTTCATTAGCGGCATCCAATACCTCGCAGGACTATCAACACTGCCAGG 5700
Qy 5701 GAACCCTGCTGTAGCTTCCATGATGGCATTCAGTGCCGCCCTCACCAGTCCGTTGTCAAC 5760
Db 5701 GAACCCTGCAGTAGCTTCCATGATGGCGTTCAGTGCCGCCCTCACCAGTCCGCTGTCAAC 5760
Qy 5761 TAGCACCACTATCCTTCTCAACATTTTGGGGGGCTGGCTAGCATCCCAAATTGCGCCTCC 5820
Db 5761 AAGCACCACTATCCTTCTCAACATTTTGGGGGGCTGGCTAGCATCCCAAATTGCACCACC 5820
Qy 5821 CGCGGGGGCTACCGGCTTCGTCGTCAGTGGCCTGGTGGGGGCTGCCGTAGGCAGCATAGG 5880
Db 5821 CGCGGGGGCCACTGGCTTCGTTGTCAGTGGCCTAGTGGGAGCTGCCGTAGGCAGTATAGG 5880
Qy 5881 CTTGGGTAAGGTGCTGGTGGACATCCTGGCAGGGTATGGTGCGGGCATTTCGGGGGCTCT 5940
Db 5881 CTTAGGTAAGGTGCTAGTGGACATCCTGGCAGGGTATGGTGCGGGCATTTCGGGGGCTCT 5940
Qy 5941 CGTCGCATTCAAGATCATGTCTGGCGAGAAGCCCTCCATGGAGGATGTTGTCAACCTGCT 6000
Db 5941 CGTCGCATTCAAGATCATGTCTGGCGAGAAGCCCTCCATGGAGGATGTCGTCAACTTGCT 6000
Qy 6001 GCCTGGAATTCTGTCTCCGGGTGCCCTGGTGGTGGGAGTCATCTGCGCGGCCATCCTGCG 6060

```
Db   6001 GCCTGGAATTCTGTCTCCGGGTGCCTTGGTAGTGGGAGTCATCTGCGCGGCCATTCTGCG 6060

Qy   6061 CCGACACGTGGGACCGGGGGAAGGCGCTGTCCAATGGATGAATAGGCTCATTGCCTTTGC 6120
Db   6061 CCGACACGTGGGACCGGGGGAAGGCGCCGTCCAATGGATGAATAGACTCATTGCCTTTGC 6120

Qy   6121 TTCCAGAGGAAACCACGTCGCCCCCACCCACTACGTGACGGAGTCGGATGCGTCGCAGCG 6180
Db   6121 TTCCAGAGGAAATCACGTCGCCCCCACCCACTACGTGACGGAGTCGGATGCGTCGCAGCG 6180

Qy   6181 TGTGACCCAACTACTTGGCTCCCTTACCATAACCAGCCTGCTCAGGAGACTCCACAACTG 6240
Db   6181 TGTGACCCAACTACTTGGCTCCCTTACCATAACCAGCCTGCTCAGAAGACTCCACAACTG 6240

Qy   6241 GATTACTGAAGACTGCCCCATCCCATGCAGCGGCTCGTGGCTCCGCGATGTGTGGGATTG 6300
Db   6241 GATTACTGAGGACTGCCCCATCCCATGCGGCGGCTCGTGGCTCCGCGATGTGTGGGACTG 6300

Qy   6301 GGTTTGCACCATCCTAACAGACTTTAAAAACTGGCTGACCTCCAAATTGTTCCCAAAGAT 6360
Db   6301 GGTTTGCACCATCCTAACAGACTTTAAAAATTGGCTGACCTCCAAATTATTCCCAAAGAT 6360

Qy   6361 GCCTGGTCTCCCCTTTATCTCTTGTCAAAAGGGGTACAAGGGCGTGTGGGCTGGCACTGG 6420
Db   6361 GCCCGGCCTCCCCTTTGTCTCCTGTCAAAAGGGGTACAAGGGCGTGTGGGCCGGCACTGG 6420

Qy   6421 TATCATGACCACACGGTGTCCTTGCGGCGCCAATATCTCTGGCAATGTCCGCCTGGGCTC 6480
Db   6421 CATCATGACCACACGGTGTCCTTGCGGCGCCAATATCTCTGGCAATGTCCGCTTGGGCTC 6480

Qy   6481 CATGAGAATTACGGGGCCCAAAACCTGCATGAATATCTGGCAGGGGACCTTTCCCATCAA 6540
Db   6481 CATGAGAATCACGGGGCCTAAGACCTGCATGAATATCTGGCAGGGGACCTTTCCTATCAA 6540

Qy   6541 TTGTTACACGGAGGGCCAGTGCGTGCCGAAACCCGCACCAAACTTTAAGATCGCCATCTG 6600
Db   6541 TTGTTACACGGAGGGCCAGTGCGTGCCGAAACCCGCGCCAAACTTTAAGGTCGCCATCTG 6600

Qy   6601 GAGGGTGGCGGCCTCAGAGTACGCGGAGGTGACGCAGCACGGGTCATACCACTACATAAC 6660
Db   6601 GAGGGTGGCGGCCTCAGAGTACGCGGAGGTGACGCAGCACGGGTCATACCACTACATAAC 6660

Qy   6661 AGGACTTACCACTGATAACTTGAAAGTTCCTTGCCAACTACCTTCTCCAGAGTTCTTTTC 6720
Db   6661 AGGACTCACCACTGATAACTTGAAAGTCCCCTGCCAACTACCCTCTCCCGAGTTCTTTTC 6720

Qy   6721 CTGGGTGGACGGAGTGCAGATCCATAGGTTTGCCCCCATACCGAAGCCGTTTTTTCGGGA 6780
Db   6721 CTGGGTGGACGGAGTGCAGATCCATAGGTTTGCCCCCACACCGAAGCCGTTTTTCCGGGA 6780

Qy   6781 TGAGGTCTCGTTCTGCGTTGGGCTTAATTCATTTGTCGTCGGGTCTCAGCTCCCTTGCGA 6840
Db   6781 TGAGGTCTCGTTCTGCGTTGGGCTTAATTCATTTGTCGTCGGGTCCCAGCTTCCTTGCGA 6840

Qy   6841 TCCTGAACCTGACACAGACGTATTGACGTCCATGCTAACAGACCCATCCCATATCACGGC 6900
Db   6841 CCCTGAACCCGACACAGACGTATTGATGTCCATGCTAACAGATCCATCTCATATCACGGC 6900

Qy   6901 GGAGACTGCAGCGCGGCGTTTGGCACGGGGGTCACCCCCGTCCGAGGCAAGCTCCTCAGC 6960
Db   6901 GGAGACTGCAGCGCGGCGTTTAGCGCGGGGGTCACCCCCATCCGAGGCAAGCTCCTCGGC 6960

Qy   6961 GAGCCAGCTATCGGCACCATCGCTGCGAGCCACCTGCACCACCCACGGCAAGGCCTATGA 7020
Db   6961 GAGCCAGCTATCGGCACCATCGCTGCGAGCCACCTGCACCACCCACGGCAAAGCCTATGA 7020

Qy   7021 TGTGGACATGGTGGATGCCAACCTGTTCATGGGGGGCGATGTGACCCGGATAGAGTCTGA 7080
Db   7021 TGTGGACATGGTGGATGCTAACCTGTTCATGGGGGGCGATGTGACTCGGATAGAGTCTGG 7080

Qy   7081 GTCCAAAGTGGTCGTTCTGGACTCTCTCGACCCAATGGTCGAAGAAAGGAGCGACCTTGA 7140
Db   7081 GTCCAAAGTGGTCGTTCTGGACTCTCTCGACCCAATGGTCGAAGAAAGGAGCGACCTTGA 7140

Qy   7141 GCCTTCGATACCATCGGAATATATGCTCCCCAAGAAGAGATTCCCACCAGCCTTACCGGC 7200
Db   7141 GCCTTCGATACCATCAGAATACATGCTCCCCAAGAAGAGGTTCCCACCAGCTTTACCGGC 7200

Qy   7201 TTGGGCACGGCCTGATTACAACCCACCGCTTGTGGAATCGTGGAAGAGGCCAGATTACCA 7260
Db   7201 CTGGGCACGGCCTGATTACAACCCACCGCTTGTGGAATCGTGGAAAAGGCCAGATTACCA 7260

Qy   7261 ACCGGCCACTGTTGCGGGCTGCGCTCTCCCCCCCCTAAGAAAACCCCGACGCCTCCCCC 7320
Db   7261 ACCGGCCACTGTTGCGGGCTGTGCTCTCCCTCCTCCTAGGAAAACCCCGACGCCTCCCCC 7320

Qy   7321 AAGGAGACGCCGGACAGTGGGTCTGAGTGAGAGCTCCATAGCAGATGCCCTACAACAGCT 7380
Db   7321 AAGGAGGCGCCGGACAGTGGGCCTAAGTGAGGACTCCATAGGAGATGCCCTTCAACAGCT 7380

Qy   7381 GGCCATCAAGTCCTTTGGCCAGCCCCCCCCAAGCGGCGATTCAGGCCTTTCCACGGGGGC 7440
Db   7381 GGCCATTAAGTCCTTTGGCCAGCCCCCCCCAAGCGGCGATTCAGGCCTTTCCACGGGGGC 7440

Qy   7441 GGACGCAGCCGATTCCGGCAGTCGGACGCCCCCCGATGAGTTGGCCCTTTCGGAGACAGG 7500
Db   7441 GGGCGCTGCCGATTCCGGCAGTCAGACGCCTCCTGATGAGTTGGCCCTTTCGGAGACAGG 7500

Qy   7501 TTCCATCTCCTCCATGCCCCCTCTCGAGGGGGAGCCTGGAGATCCAGACTTGGAGCCTGA 7560
Db   7501 TTCCATCTCTTCCATGCCCCCCCTCGAGGGGGAGCTTGGAGATCCAGACCTGGAGCCTGA 7560

Qy   7561 GCAGGTAGAGCTTCAACCTCCCCCCCAGGGGGGGGTGGTAACCCCCGGCTCAGGCTCGGG 7620
Db   7561 GCAGGTAGAGCCCCAACCCCCCCCCCAGGGGGGGGTGGCAGCTCCCGGCTCGGACTCGGG 7620

Qy   7621 GTCTTGGTCTACTTGCTCCGAGGAGGACGACTCCGTCGTGTGCTGCTCCATGTCATACTC 7680
Db   7621 GTCCTGGTCTACTTGCTCCGAGGAGGACGACTCCGTCGTGTGCTGCTCCATGTCATACTC 7680

Qy   7681 CTGGACCGGGGCTCTAATAACTCCTTGTAGCCCCGAAGAGGAAAAGTTGCCAATTGGCCC 7740
Db   7681 CTGGACCGGGGCTCTAATAACTCCTTGTAGTCCCGAAGAGGAGAAGTTACCGATTAACCC 7740

Qy   7741 CTTGAGCAACTCCCTGTTGCGATATCACAACAAGGTGTACTGTACCACATCAAAGAGCGC 7800
Db   7741 CTTGAGCAACTCCCTGTTGCGATATCACAACAAGGTGTACTGTACCACAACAAAGAGCGC 7800

Qy   7801 CTCATTAAGGGCTAAAAAGGTAACTTTTGATAGGATGCAAGCGCTCGACGCTCATTATGA 7860
Db   7801 CTCACTAAGGGCTAAAAAGGTAACTTTTGATAGGATGCAAGTGCTCGACTCCTACTACGA 7860

Qy   7861 CTCAGTCTTGAAGGACATTAAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTTCTCACTTT 7920
Db   7861 CTCAGTCTTAAAGGACATTAAGCTAGCGGCCTCCAAGGTCACCGCAAGGCTCCTCACCAT 7920

Qy   7921 AGAGGAGGCCTGCCAGTTAACTCCACCCCACTCTGCAAGATCCAAGTATGGGTTTGGGGC 7980
Db   7921 GGAGGAGGCTTGCCAGTTAACCCCACCCCATTCTGCAAGATCTAAATATGGGTTTGGGGC 7980

Qy   7981 TAAGGAGGTCCGCAGCTTGTCCGGGAGAGCCGTTAACCACATCAAGTCCGTGTGGAAGGA 8040
Db   7981 TAAGGAGGTCCGCAGCTTGTCCGGGAGGGCCGTTAACCACATCAAGTCCGTGTGGAAGGA 8040

Qy   8041 CCTCCTGGAAGACACACAAACACCAATTCCTACAACCATCATGGCCAAAAATGAGGTGTT 8100
Db   8041 CCTCCTGGAGGACTCAGAAACACCAATTCCCACAACCATTATGGCCAAAAATGAGGTGTT 8100

Qy   8101 CTGCGTGGACCCCACCAAGGGGGGTAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCT 8160
Db   8101 CTGCGTGGACCCCACCAAGGGGGGCAAGAAAGCAGCTCGCCTTATCGTTTACCCTGACCT 8160

Qy   8161 CGGCGTCAGGGTCTGCGAGAAAATGGCCCTTTATGATATCACACAAAAGCTTCCTCAGGC 8220
Db   8161 CGGCGTCAGGGTCTGCGAGAAGATGGCCCTTTATGACATTACACAAAAACTTCCTCAGGC 8220
```





Search completed: September 9, 2004, 14:25:17
Job time : 59 secs